

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Waveform Catalogue for IASPEI Events

by

Madeleine D. Zirbes
Beverly J. Moon
U.S. Geological Survey
Denver, Colorado

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This report is preliminary and has not been edited or reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.

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Introduction

The purpose of this report is to provide a visual catalogue of digitally recorded waveform data available from the United States Geological Survey's National Earthquake Information Center (NEIC). The waveforms selected correspond to events chosen for discussion during a special session on the Analysis of Selected Earthquakes which will be convened by the Commission on Practice at the 1985 IASPEI General Assembly in Tokyo.

The goal of this special session is to provide a focus on modern scientific practice in the areas of earthquake quantification, data exchange, digital seismology, and algorithms. Participants have agreed to analyze a selection of fifty-one recent well-recorded worldwide earthquakes representing a range of sizes, locations, focal depths, and source characteristics.

To facilitate these analyses, the NEIC has expanded its digital data distribution services to provide participants with network-event tapes and, as an aid in using these tapes, this hard copy waveform catalog of the IASPEI events. The intent is to provide the researcher with a quick index both to the availability of data and to the character of the data for each event (e.g. complexity, directionality, etc.).

The network-event tapes are a recent data service initiated by the NEIC. Currently, these tapes contain data from the Global Digital Seismic Network (GDSN), the Regional Seismic Test Network (RSTN) and the Glen Almond, Canada, SRO station. In the future, data from other high-quality stations and arrays, installed and operated by many countries around the world, will be added to the event tapes. The free distribution of event tapes already includes major data centers in many countries. The event tape program is therefore international in both composition and distribution. This type of digital data exchange program would not be possible without the high level of international cooperation that has been the hallmark of seismology.

Network-event tapes contain digital data for earthquakes of magnitude 5.5 or greater in the NEIC network-day tape format. For this catalog, all available vertical component recordings in all period bands are shown, including stations which were electronically saturated, non-operational, or had some other difficulty during the event. The desired size of this catalog precluded showing horizontal components as well. In general, one can expect them to be of approximately the same quality as the vertical components at

any particular time. Most of the available stations do not have the capability for recording short-period horizontal components. All stations which have intermediate-period recordings, however, record all three components in this band. Short- and intermediate-period channels are recorded only when an event is detected. Horizontal components are recorded (when available) whenever the vertical component is, and never otherwise.

Source parameters of the IASPEI events are summarized in Table 1. The remainder of this report consists of vertical component waveforms from all reporting stations organized by event. Each event is prefaced by the station coverage map in which stations and geography within 100° of the source are shown in an azimuthal equi-distant projection centered at the epicenter. Following the coverage map, all short-period, vertical component waveforms are shown in order of increasing epicentral distance. Each waveform is two minutes long and is identified by station code, start time, and epicentral distance, Δ , in degrees. The start time is chosen to be about 15 s before the earliest theoretical arrival time of interest (P, Pdiff, or PKP_{df}, depending on distance). The ordinate is in microns of ground displacement at the dominant period of the instrument response which is taken to be 1 s. Each page of waveforms is titled with the event origin date-time, the Flinn-Engdahl region name, and the component identifier (SPZ). Also, the depth of the event and its average body and surface wave magnitudes are shown for convenience.

Following the short-period waveforms, intermediate-period vertical (IPZ) and finally long-period vertical (LPZ) waveforms are shown. In each case, the format is the same as for the short-period waveforms. Four minutes of intermediate-period data is shown beginning 30 s before the theoretical first arrival and the dominant period is assumed to be 1 s. Fifty minutes of long-period data is shown beginning one minute before the theoretical first arrival and the dominant period is taken to be 25 s. Both short-period and intermediate-period channels are recorded only when an event has been detected. In addition, only about half of the available stations have intermediate-period channels and one (GAC) has no short-period recordings. For these reasons, it is not uncommon for stations with good long-period recordings to have no intermediate-period and perhaps no short-period recordings at all.

Table 1.

Origin	Time	Latitude	Longitude	Depth	m_B	M_{sz}	Region Name
1980 01 01	16:42:40.00	38.815° N	27.780° W	10.0G	6.0	6.7	Azores Islands
1980 05 25	16:33:44.70	37.600° N	118.840° W	5.0	6.1	6.1	California-Nevada Border Region
1980 06 29	07:20:05.50	34.808° N	139.181° E	15.0	5.8	6.2	Near S. Coast of Honshu, Japan
1980 07 29	14:58:40.80	29.598° N	81.092° E	18.0D	6.1	6.5	Nepal
1980 10 10	12:25:23.50	36.195° N	1.354° E	10.0G	6.5	7.3	Algeria
1980 10 24	14:53:35.10	18.211° N	98.240° W	72.0	6.4		Central Mexico
1980 11 08	10:27:34.00	41.117° N	124.253° W	19.0D	6.2	7.2	Near Coast of Northern Calif.
1980 11 23	18:34:53.80	40.914° N	15.366° E	10.0G	6.0	6.9	Southern Italy
1981 01 18	18:17:24.40	38.640° N	142.750° E	33.0N	6.1	6.9	Near East Coast of Honshu, Japan
1981 01 23	21:13:51.70	30.927° N	101.098° E	33.0N	5.7	6.8	Sichuan Province, China
1981 07 06	03:08:24.18	22.293° S	171.742° E	33.0N	6.9	7.0	Loyalty Islands Region
1981 10 28	04:34:17.78	31.272° S	110.649° W	10.0G	6.2	6.2	Easter Island Region
1981 11 22	15:05:20.56	18.752° N	120.839° E	24.0D	6.2	6.5	Luzon, Philippine Islands
1981 11 27	17:21:45.80	42.913° N	131.076° E	543.0D	5.8		E. USSR-N.E. China Border Reg.
1982 01 03	14:09:50.45	0.972° S	21.870° W	10.0G	5.8	6.5	Central Mid-Atlantic Ridge
1982 01 09	12:53:51.88	46.984° N	66.656° W	10.1G	5.7	5.2	New Brunswick
1982 08 05	20:32:52.95	12.597° S	165.931° E	30.7	6.2	7.1	Santa Cruz Islands
1982 09 06	01:47:02.73	29.325° N	140.360° E	175.8	6.5		South of Honshu, Japan
1982 12 13	09:12:48.05	14.701° N	44.379° E	5.0G	6.0	6.0	Western Arabian Peninsula
1983 02 13	01:40:10.98	39.945° N	75.135° E	16.1	5.6	6.2	Southern Xinjiang, China
1983 04 03	02:50:01.18	8.717° N	83.123° W	37.0D	6.5	7.3	Costa Rica
1983 04 04	02:51:34.36	5.723° N	94.722° E	78.5	6.6		Northern Sumatera
1983 04 11	08:18:10.12	10.419° N	62.764° W	40.0	6.0	5.9	Near Coast of Venezuela
1983 04 18	10:58:51.26	27.793° N	62.054° E	64.0	6.5		Southern Iran
1983 05 02	23:42:37.76	36.219° N	120.317° W	10.2G	6.2	6.5	Central California
1983 05 26	02:59:59.60	40.462° N	139.102° E	23.7	6.8	7.7	Near West Coast of Honshu, Japan
1983 06 01	01:59:54.68	17.038° S	174.605° W	179.6D	6.2		Tonga Islands
1983 06 02	20:12:50.73	9.512° S	71.249° W	598.6	5.9		Peru-Brazil Border Region
1983 06 09	18:46:00.90	51.414° N	174.111° W	20.8	6.2	5.8	Andreanof Islands, Aleutian Is.
1983 06 21	06:25:27.35	41.346° N	139.099° E	9.9	6.7	6.9	Hokkaido, Japan Region
1983 06 24	09:06:45.80	24.176° N	122.402° E	44.1	6.1	6.7	Taiwan Region
1983 07 12	15:10:03.40	61.031° N	147.286° W	37.0	6.1	6.4	Southern Alaska
1983 08 06	15:43:51.24	40.142° N	24.766° E	2.4	6.2	7.0	Aegean Sea
1983 08 17	10:55:54.13	55.867° N	161.287° E	62.6	6.6		Near East Coast of Kamchatka
1983 09 07	19:22:05.15	60.976° N	147.500° W	45.0	6.2	6.2	Southern Alaska
1983 09 12	15:42:08.55	36.502° N	71.082° E	208.8D	6.1		Afghanistan-USSR Border Region
1983 10 04	18:52:13.30	26.535° S	70.563° W	14.8	6.4	7.3	Near Coast of Northern Chile
1983 10 09	11:25:40.58	26.135° S	70.518° W	16.1	5.9	6.2	Near Coast of Northern Chile
1983 10 17	19:36:21.47	37.588° N	17.520° W	10.0G	6.0	6.3	North Atlantic Ocean
1983 10 22	04:21:35.01	60.665° S	25.451° W	24.0D	6.5	6.8	South Sandwich Islands Region
1983 10 30	04:12:27.13	40.330° N	42.187° E	11.6	6.1	6.9	Turkey
1983 11 16	16:13:00.07	19.430° N	155.454° W	12.0G	6.4	6.7	Hawaii
1983 11 24	05:30:34.23	7.481° S	128.168° E	178.5	6.4		Banda Sea
1983 11 30	17:46:00.67	6.852° S	72.110° E	10.0G	6.6	7.6	Chagos Archipelago Region
1983 12 22	04:11:29.23	11.866° N	13.529° W	11.3	6.4	6.2	Northwest Africa
1983 12 30	23:52:39.93	36.372° N	70.738° E	214.5D	6.6		Hindu Kush Region
1984 01 01	09:03:37.59	33.404° N	137.322° E	374.2D	6.5		Near S. Coast of Honshu, Japan
1984 02 07	21:33:20.50	9.924° S	160.455° E	14.2	6.5	7.5	Solomon Islands
1984 03 05	03:33:51.23	8.136° N	123.765° E	650.6D	6.7		Mindanao, Philippine Islands
1984 03 19	20:28:39.80	40.288° N	63.333° E	25.8D	6.5	7.0	Uzbek SSR
1984 03 24	09:44:02.61	44.162° N	148.289° E	43.0D	6.1	7.1	Kuril Islands

Table Definitions

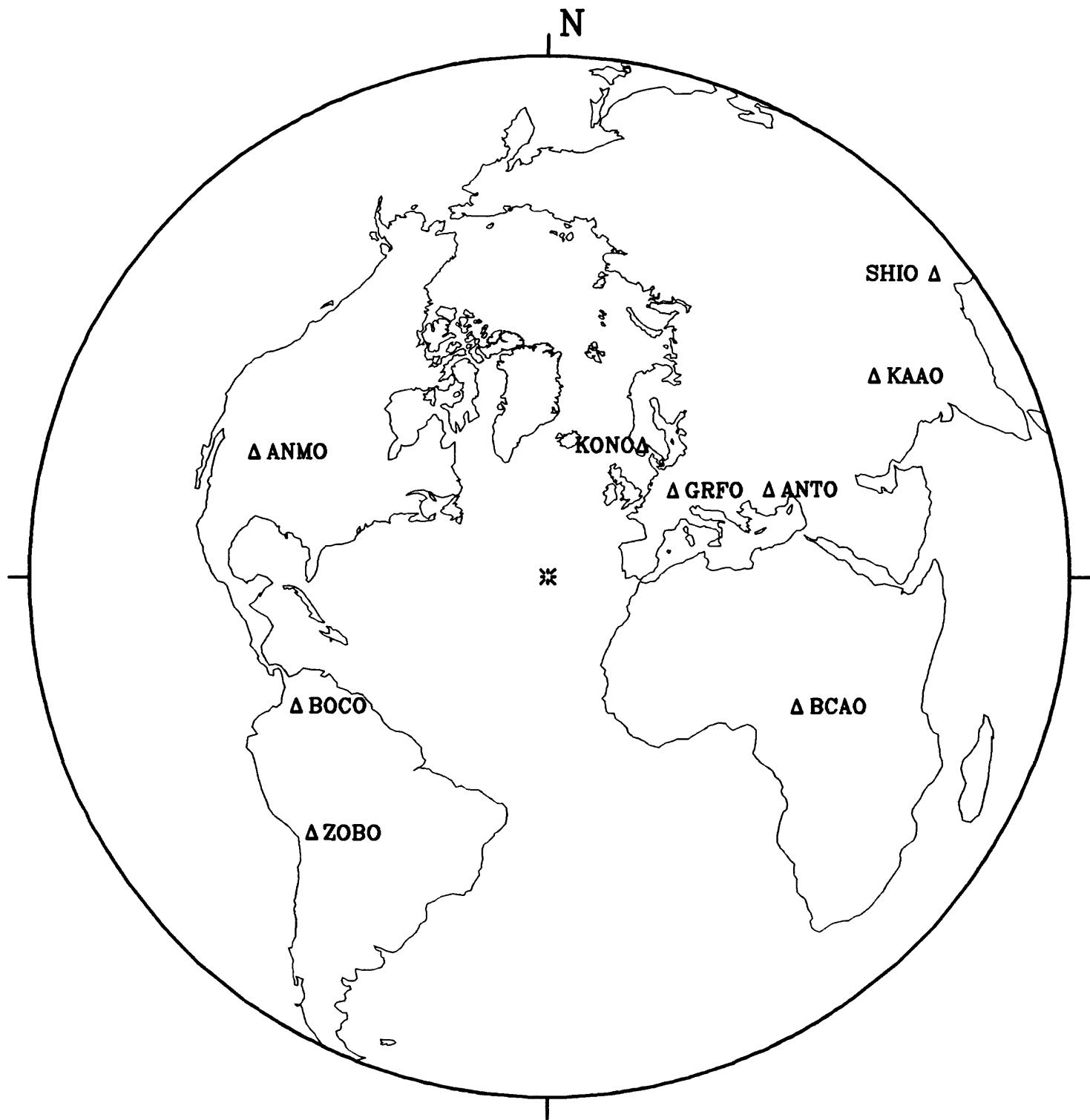
Origin time is listed in coordinated universal time (UTC). Latitude and longitude are in geographical coordinates. Depth is in kilometers. An 'N' following the depth indicates the depth was restrained at 33 km for earthquakes whose character on seismograms indicates a shallow focus but whose depth is not satisfactorily determined by the data. A 'D' following the depth indicates the depth was restrained by the computer program based on 2 or more compatible pP phases and/or unidentified secondary arrivals used as pP. A 'G' following the depth indicates the depth was restrained by an NEIS geophysicist, based on evidence from available seismograms. m_B is body wave magnitude and M_{SZ} is vertical surface wave magnitude. Region name is the Flinn-Engdahl region name associated with a latitude and longitude.

Acknowledgement

The authors thank Bob Engdahl, Ray Buland, Bob Massé, and Stu Sipkin for many helpful suggestions and for their aid in laying out the figures.

01 January 1980 16:42:40.00

Azores Islands

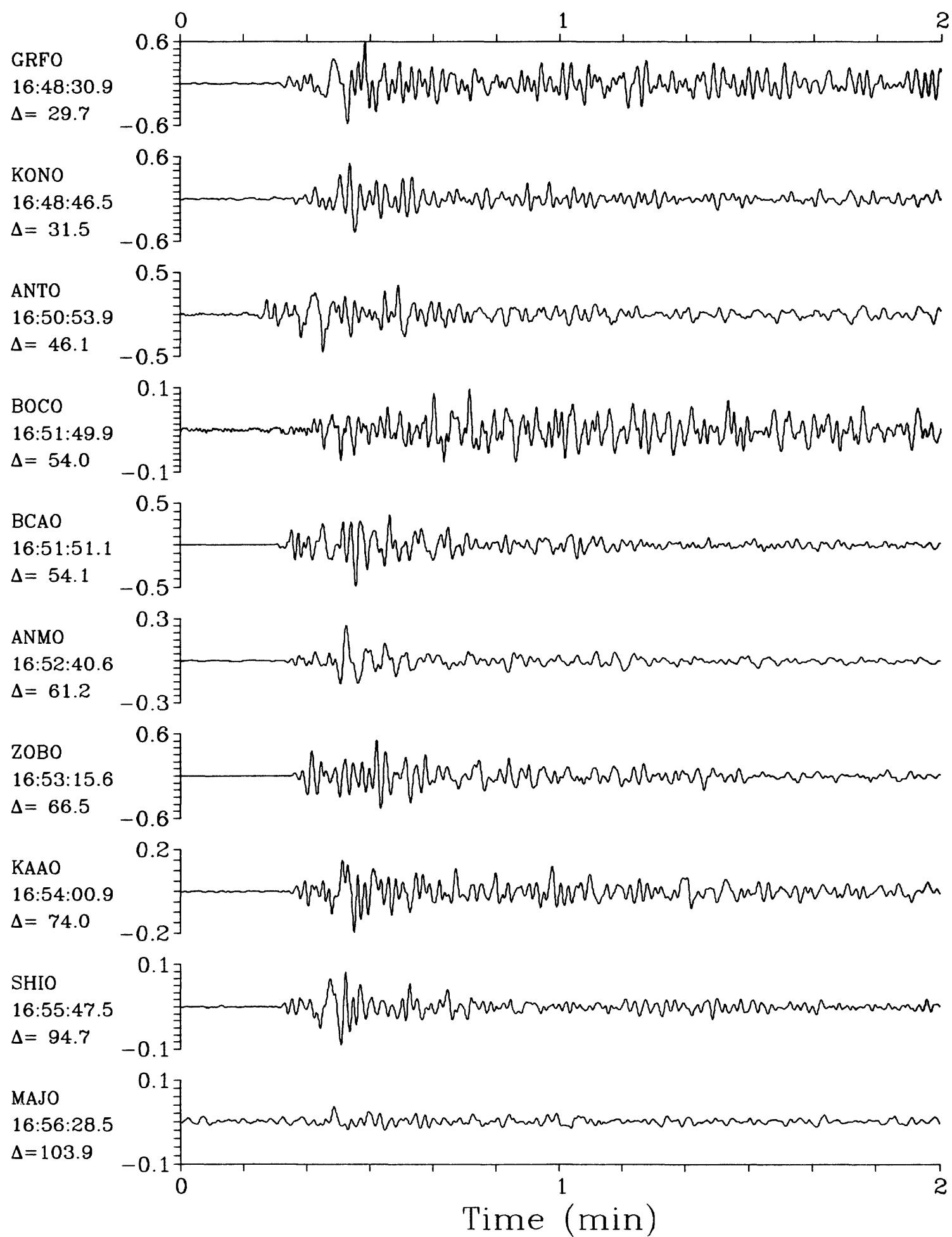


2 SPZ

01 January 1980 16:42:40.00

SPZ

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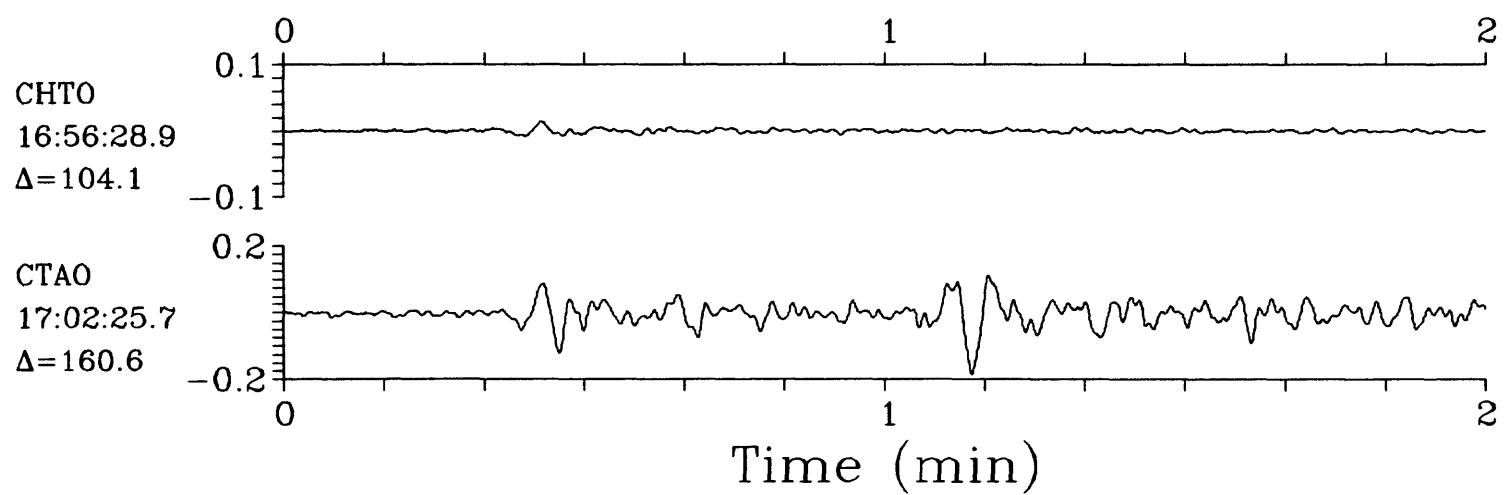


SPZ

01 January 1980 16:42:40.00

SPZ³

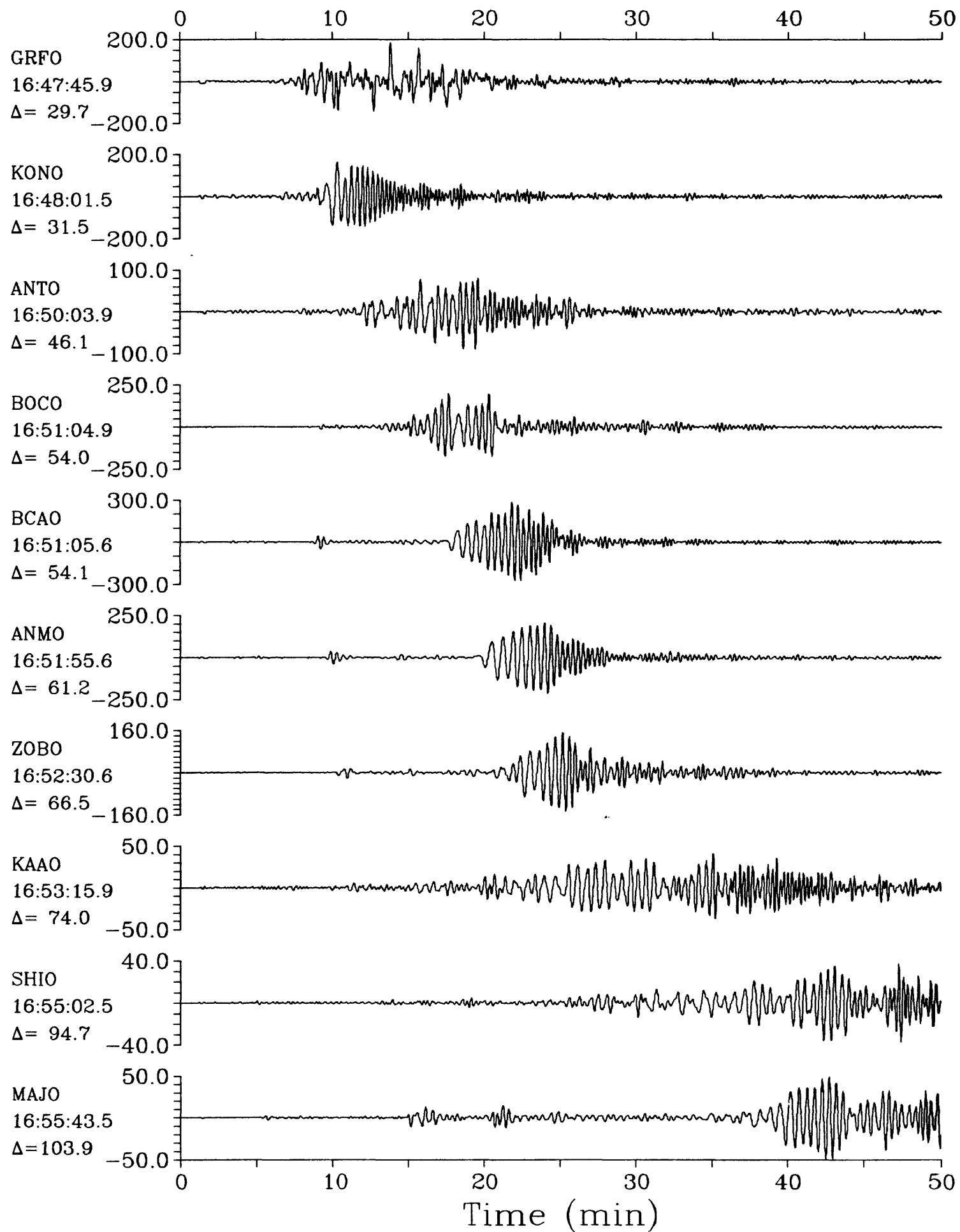
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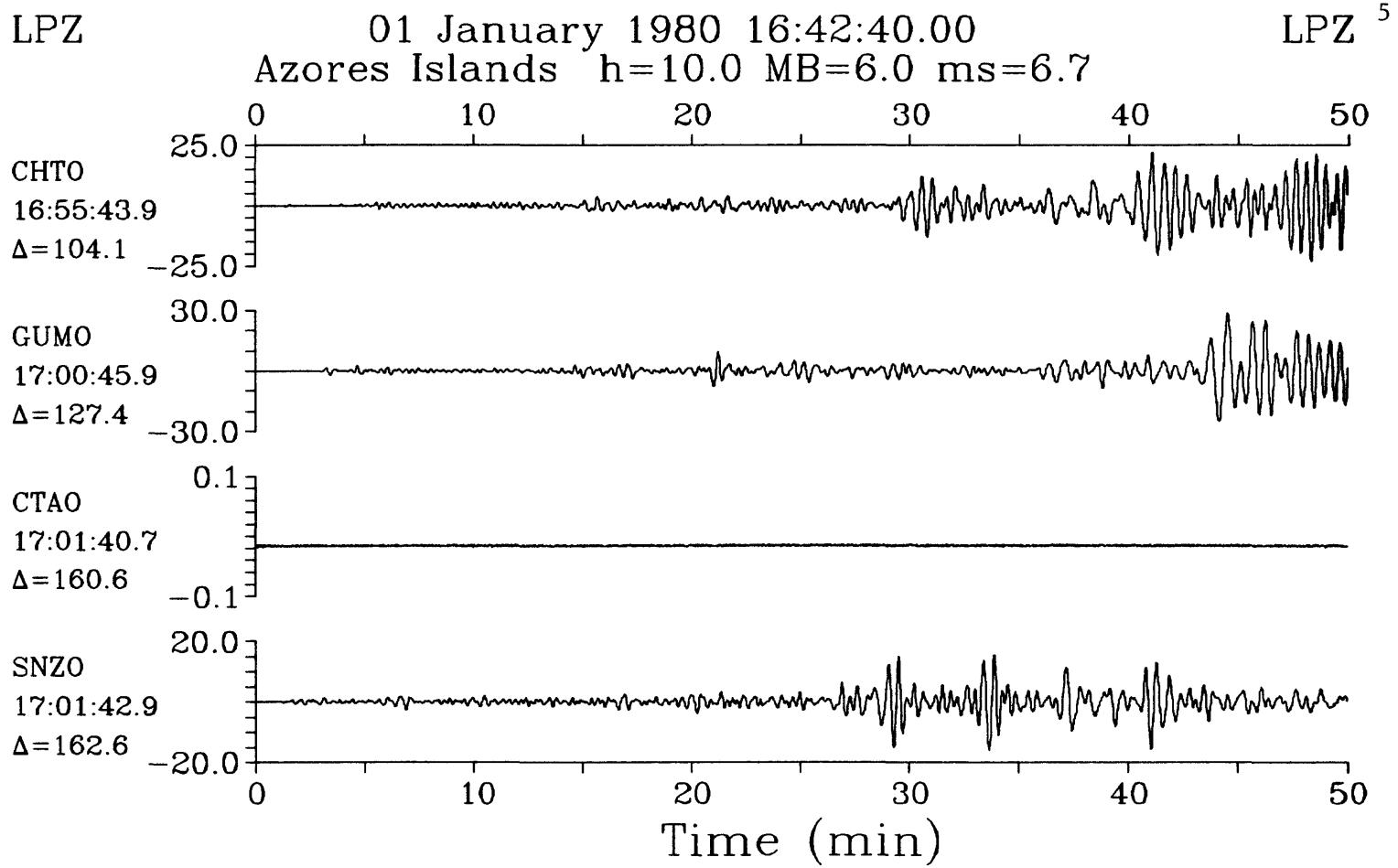
4 LPZ

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LPZ

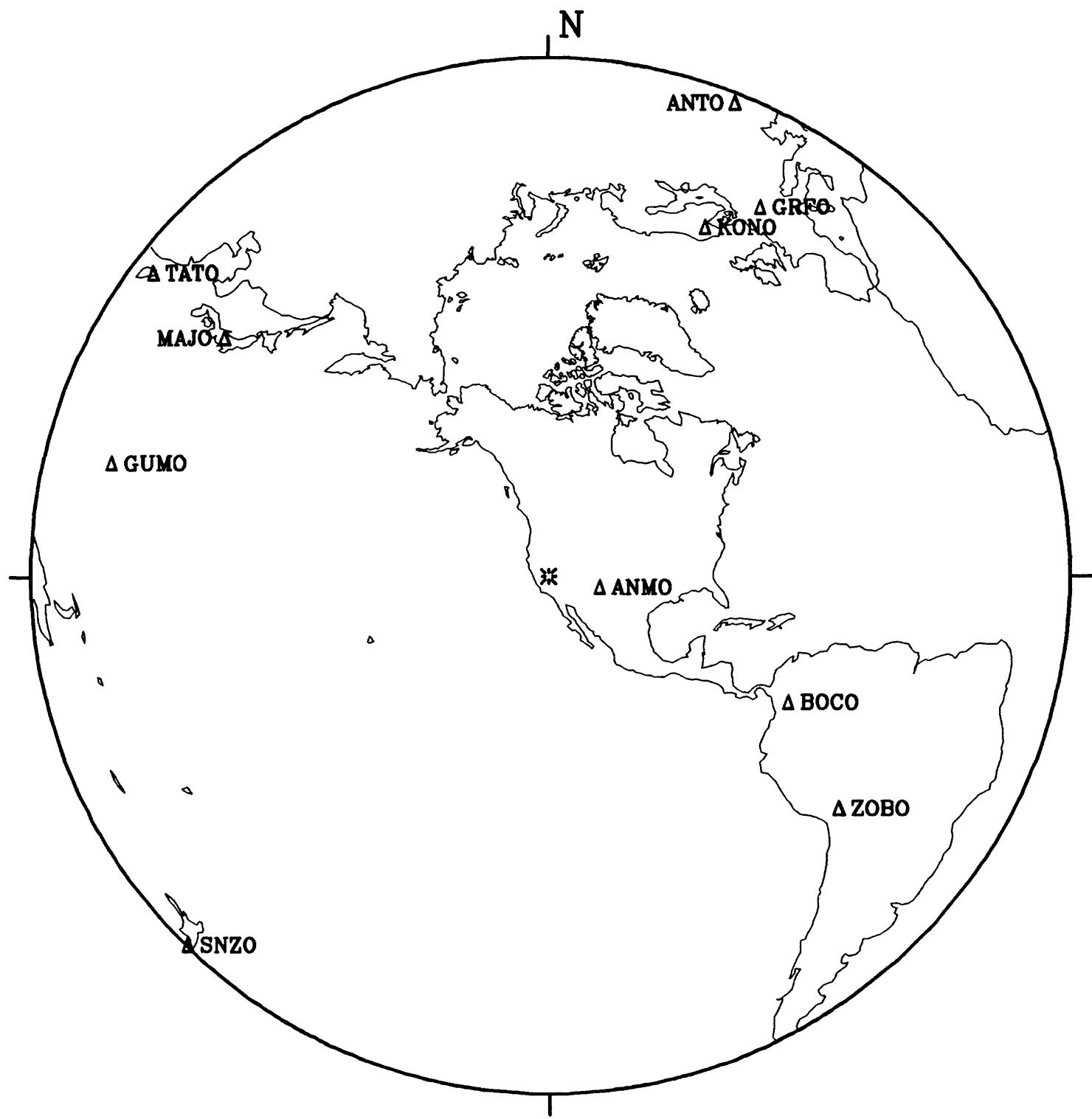


LPZ



25 May 1980 16:33:44.70

California–Nevada Border Region

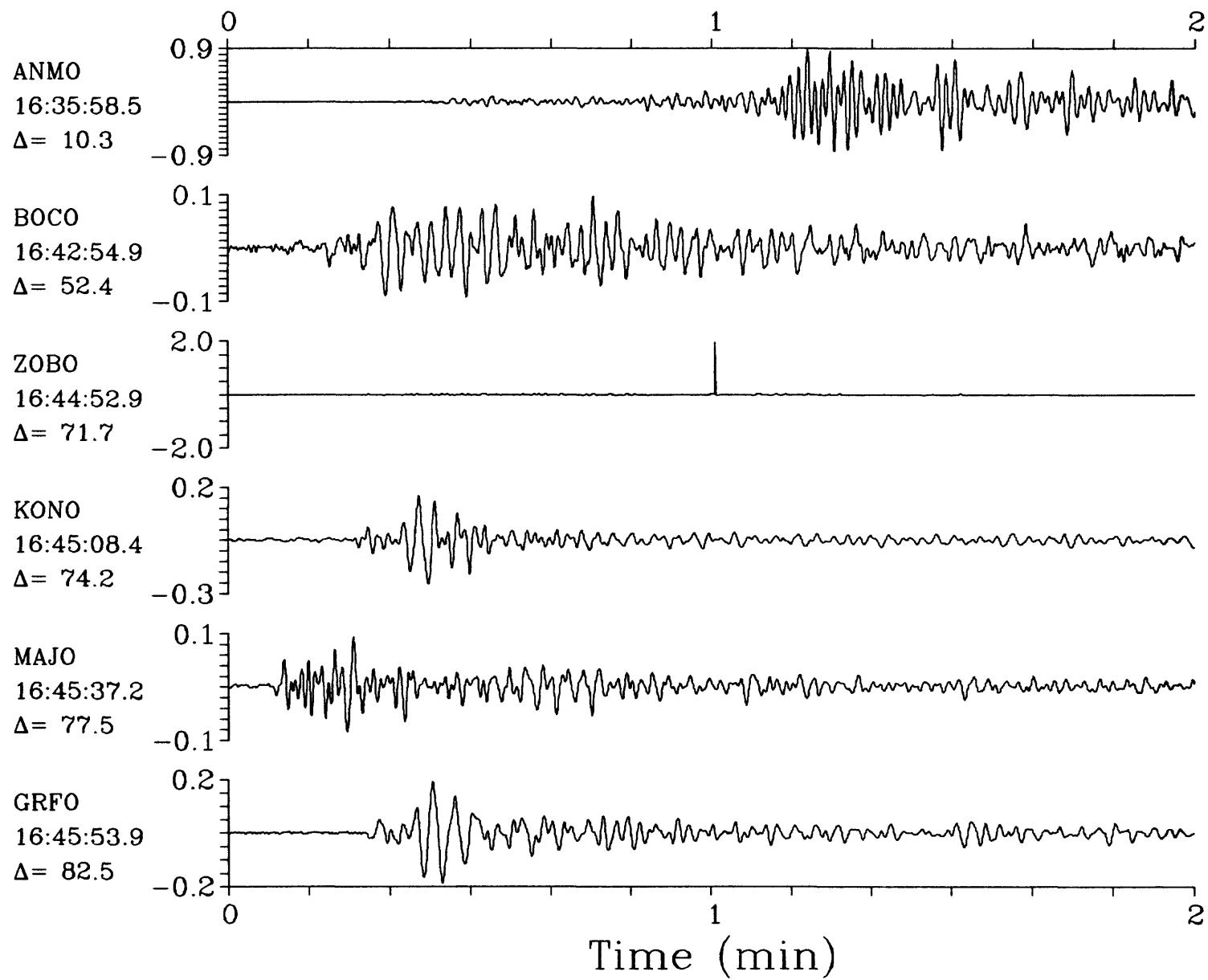


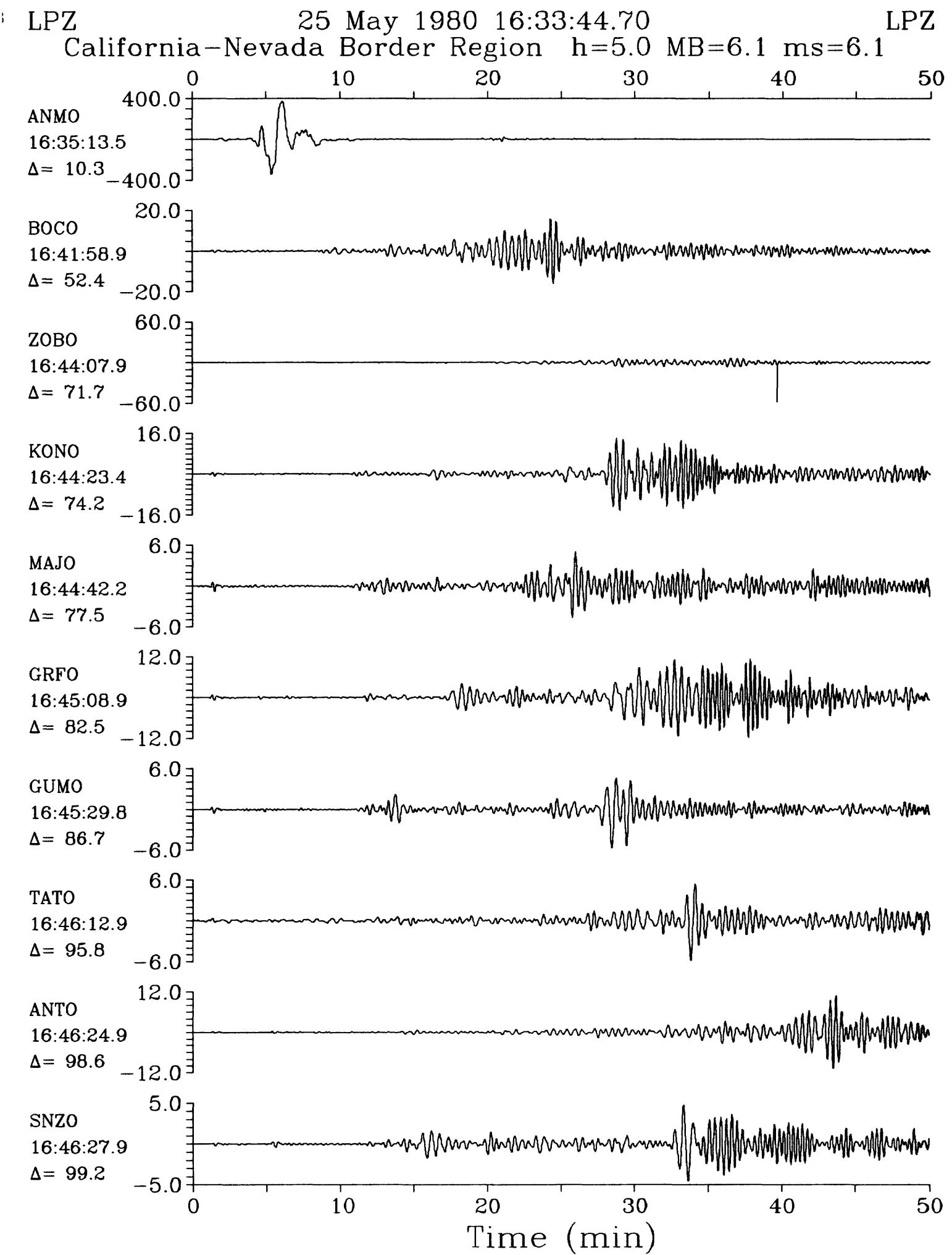
SPZ

25 May 1980 16:33:44.70

SPZ⁷

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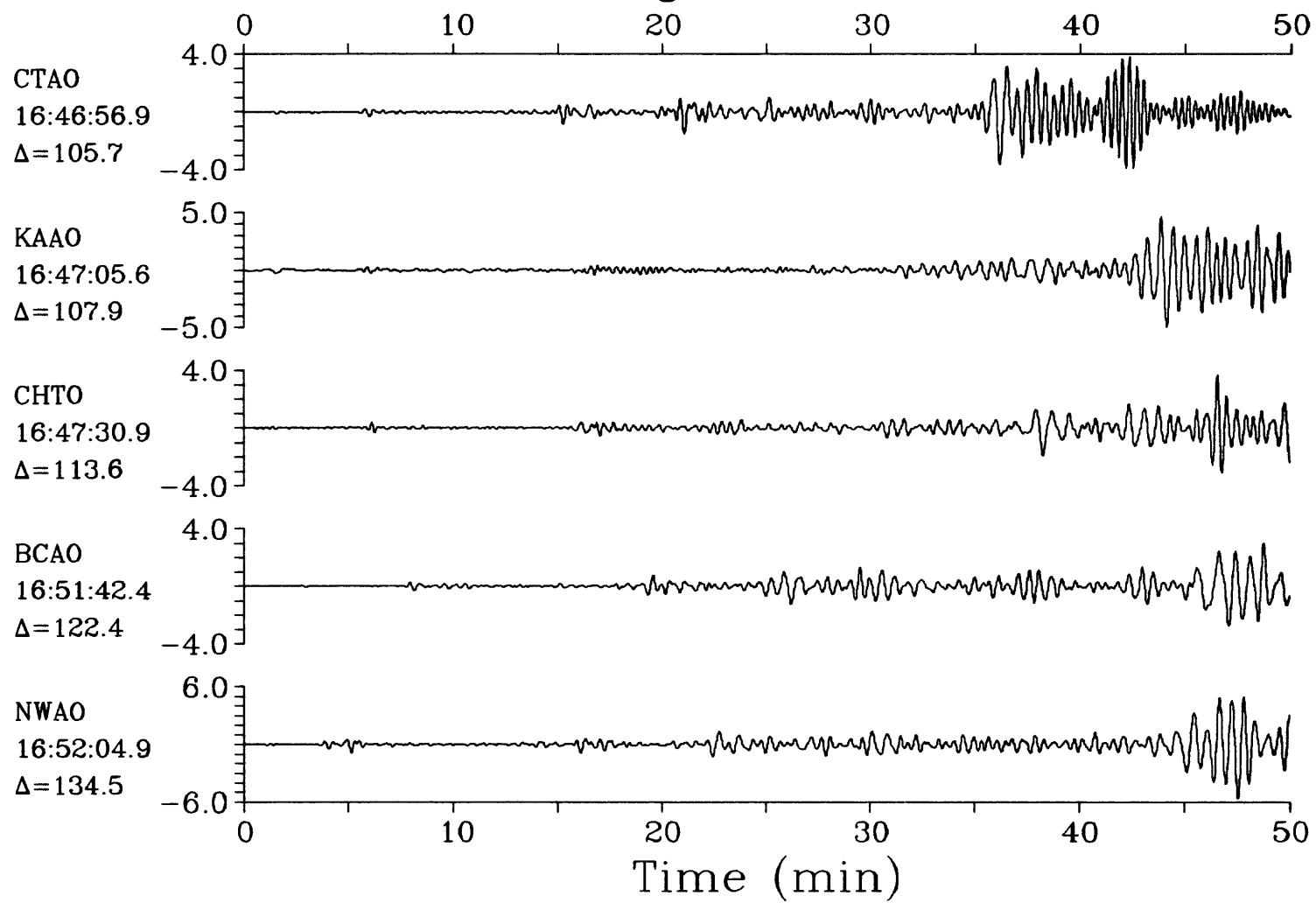


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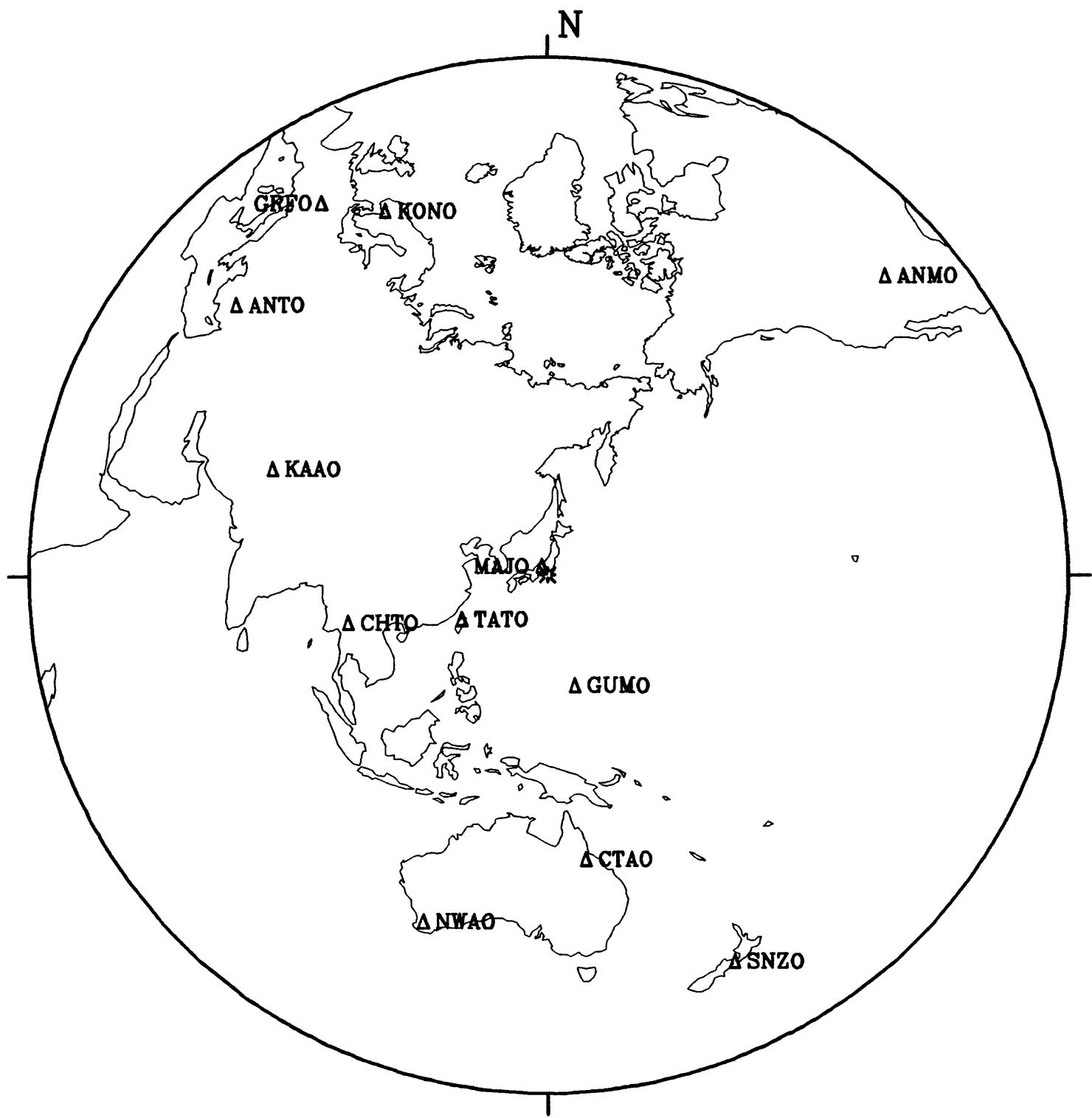
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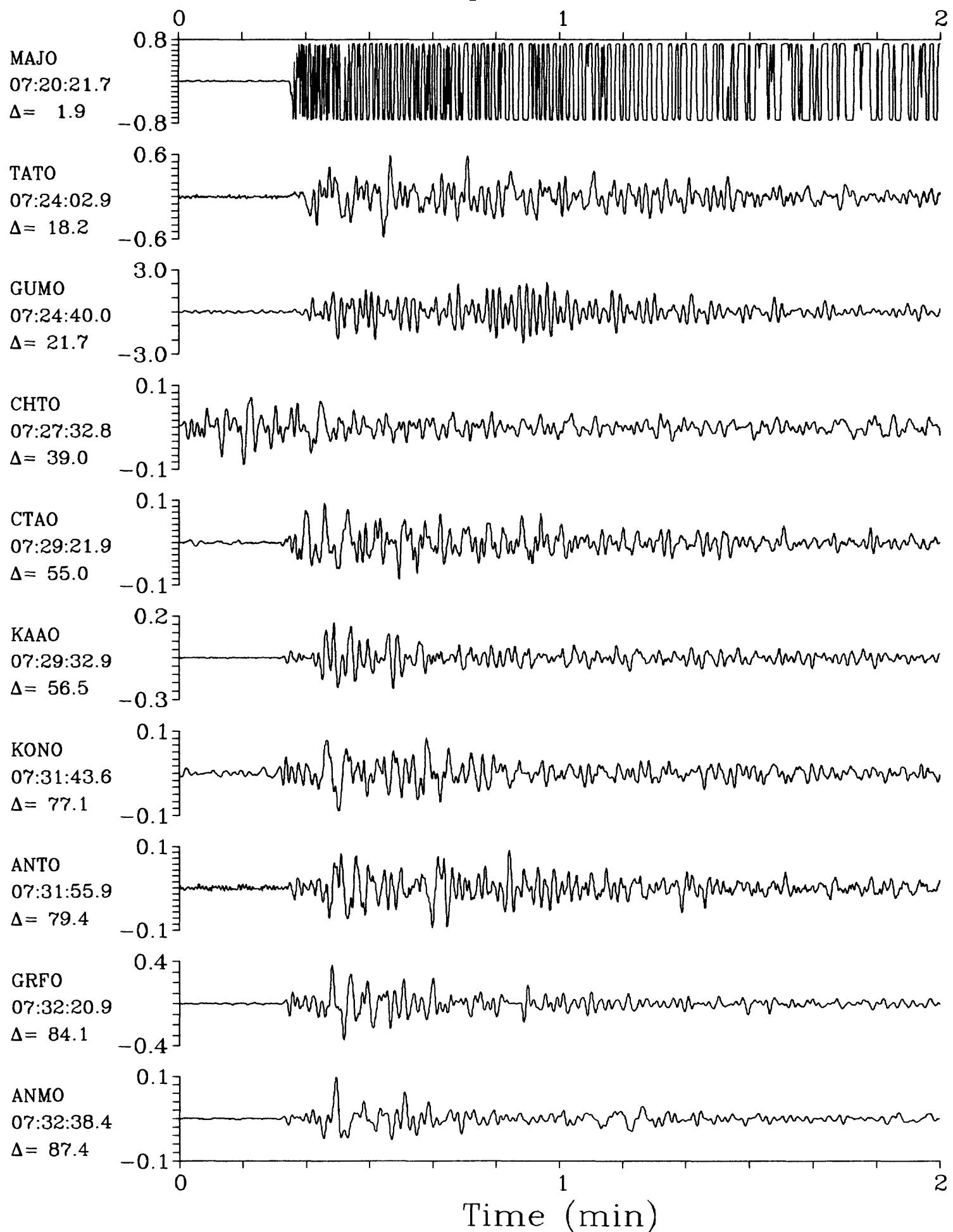


SPZ

29 June 1980 07:20:05.50

SPZ¹¹

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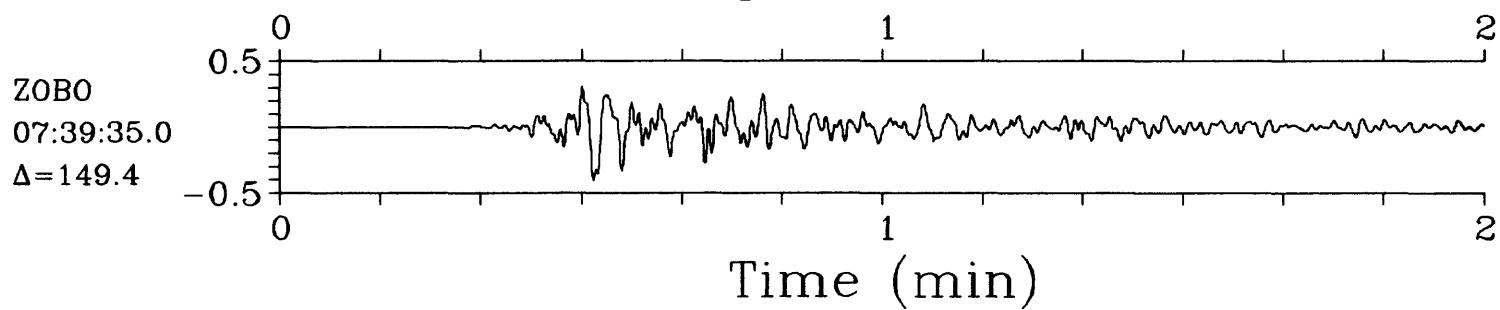


¹²SPZ

29 June 1980 07:20:05.50

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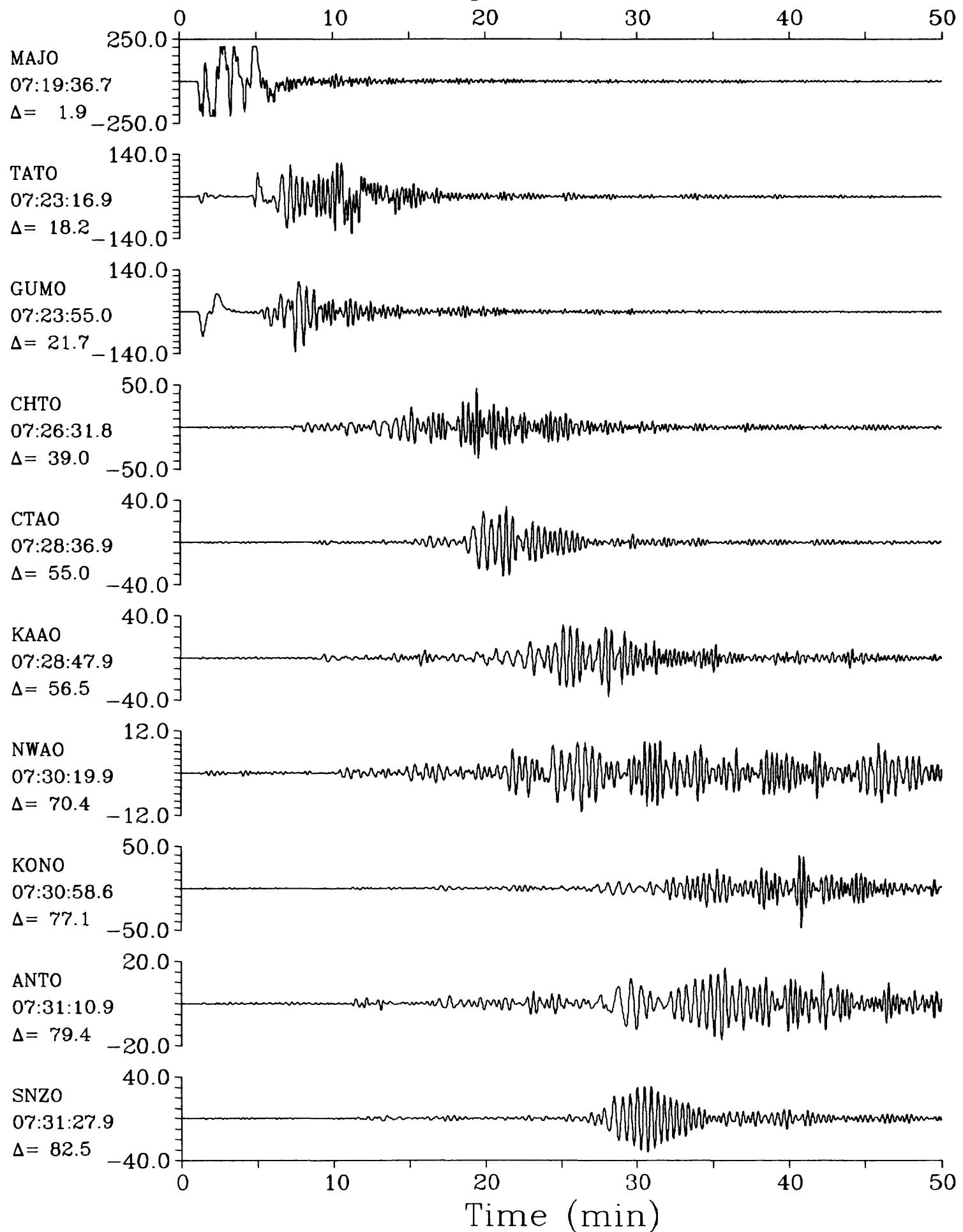


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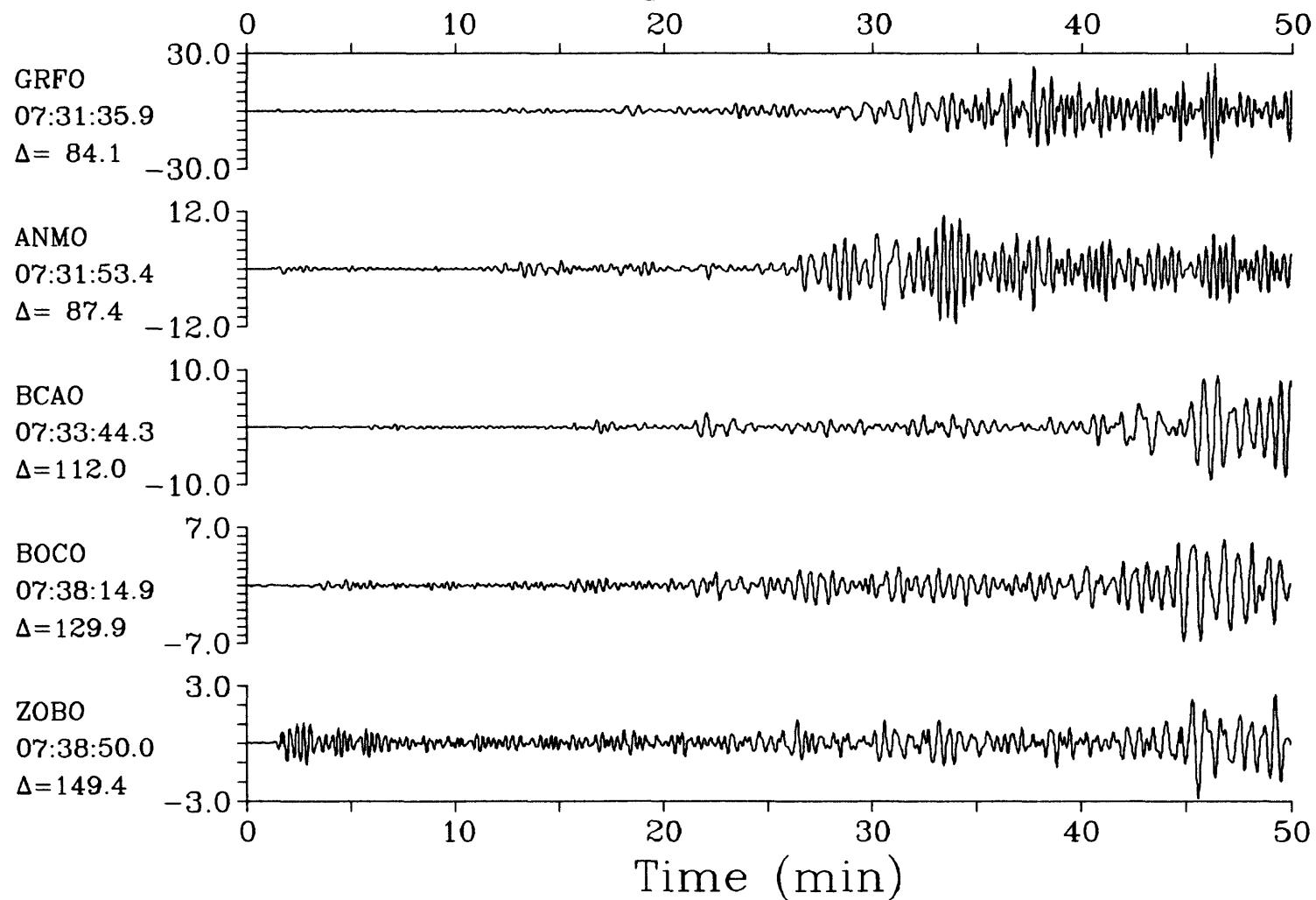


¹⁴ LPZ

29 June 1980 07:20:05.50

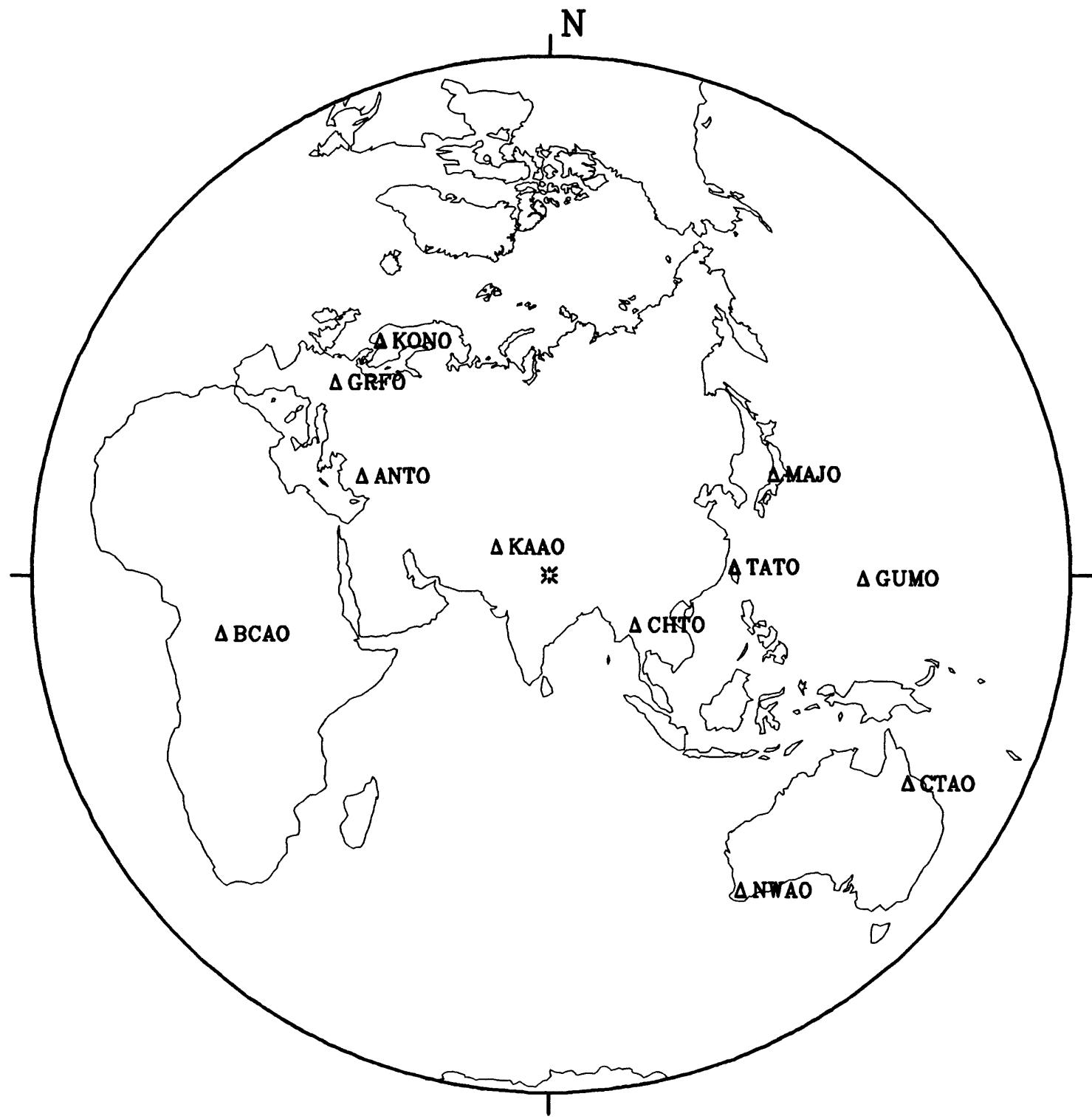
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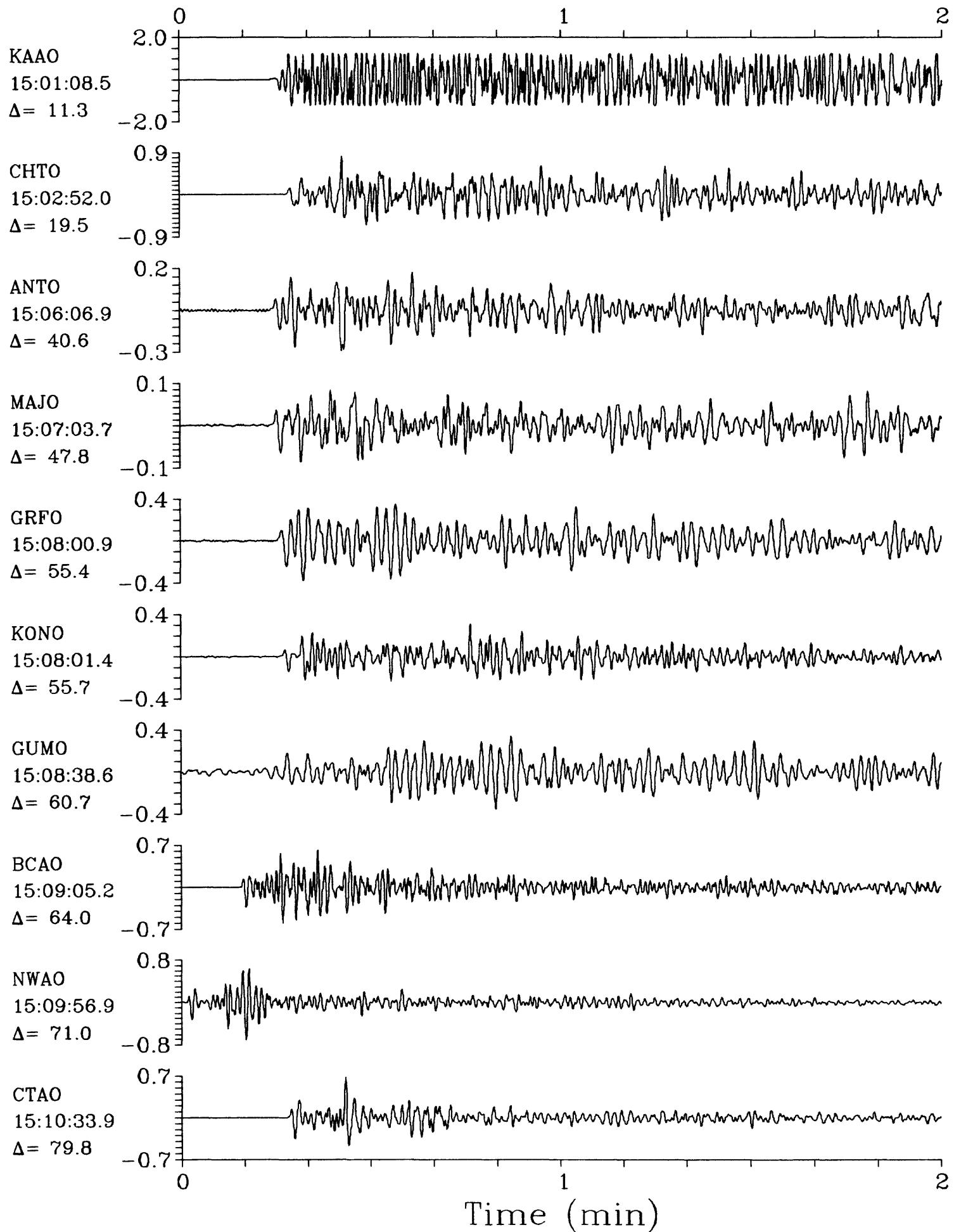
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Nepal

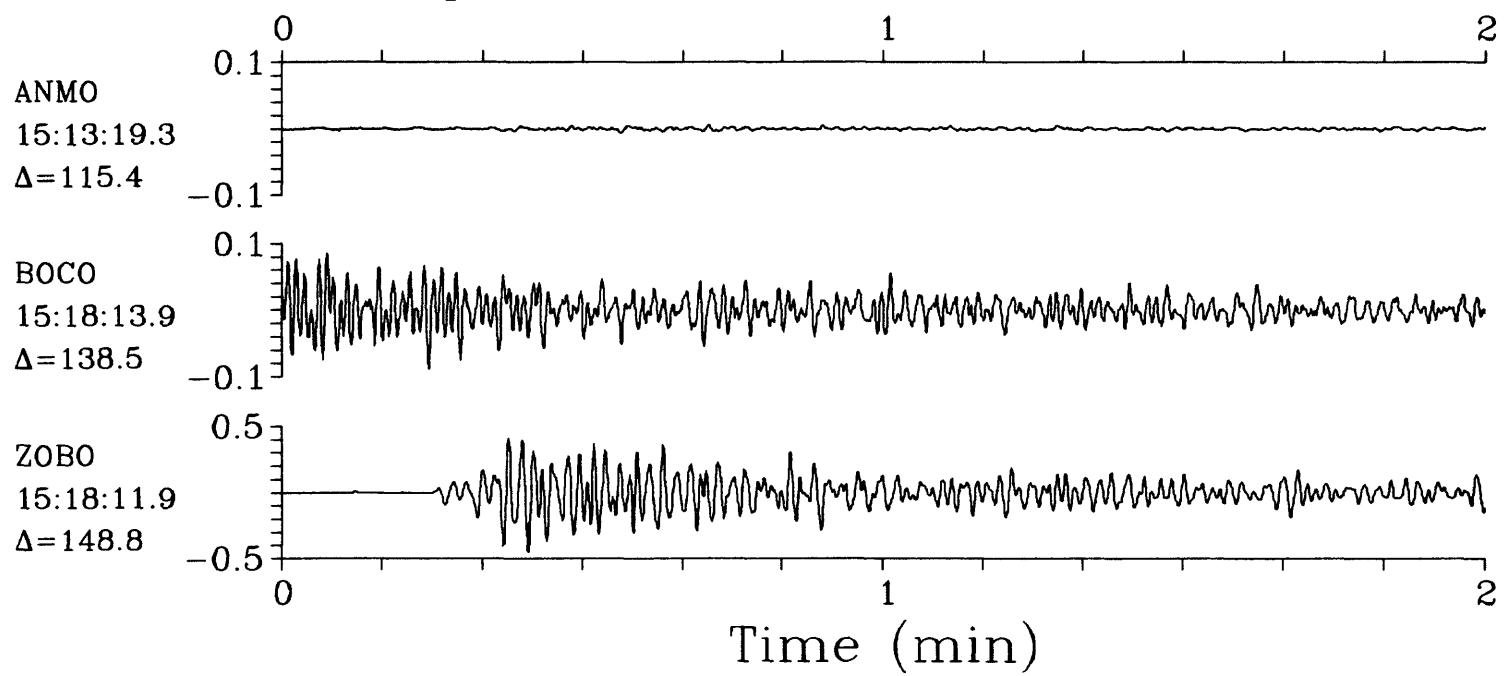


¹⁶SPZ29 July 1980 14:58:40.80
Nepal h=18.0 MB=6.1 ms=6.5

SPZ



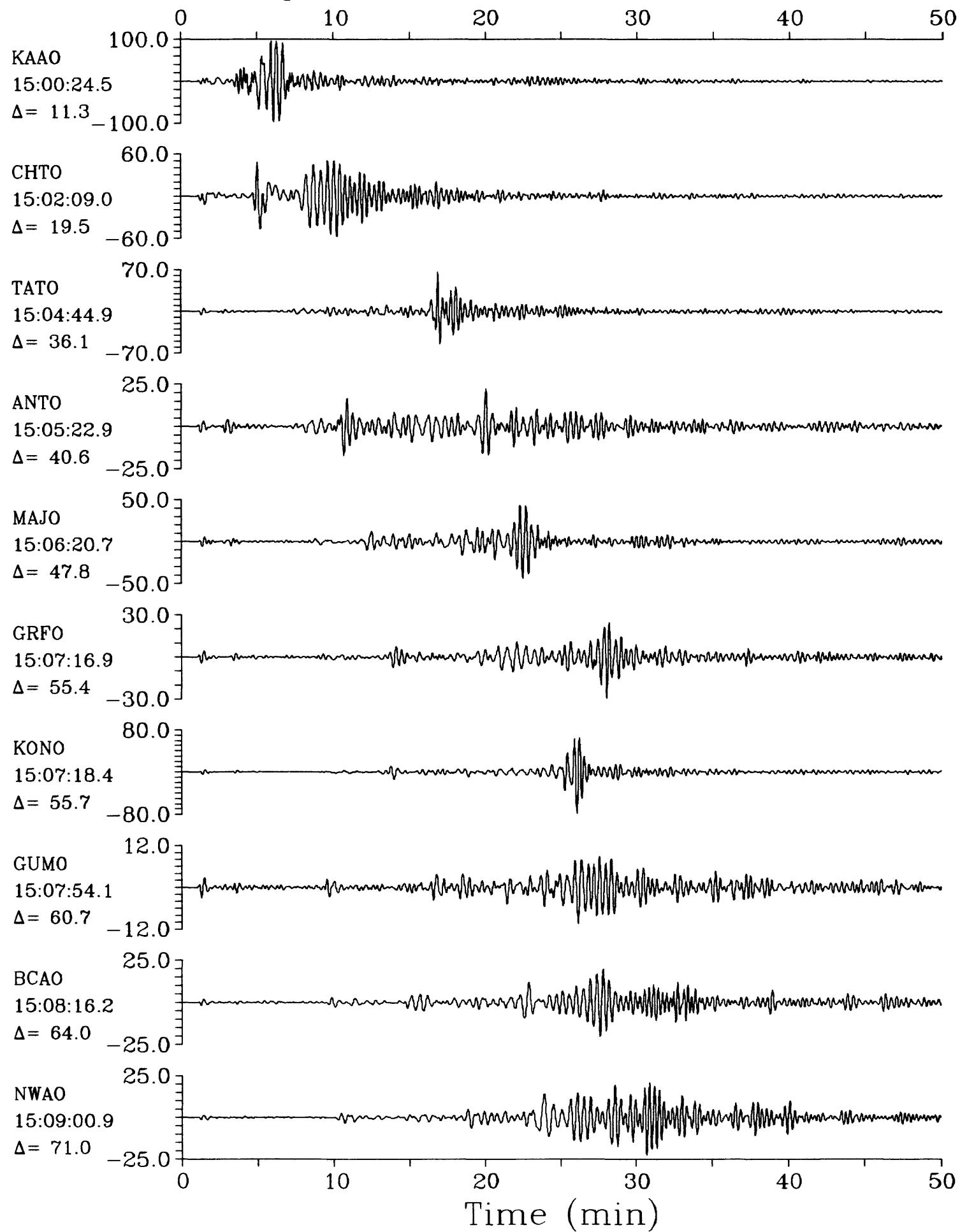
SPZ

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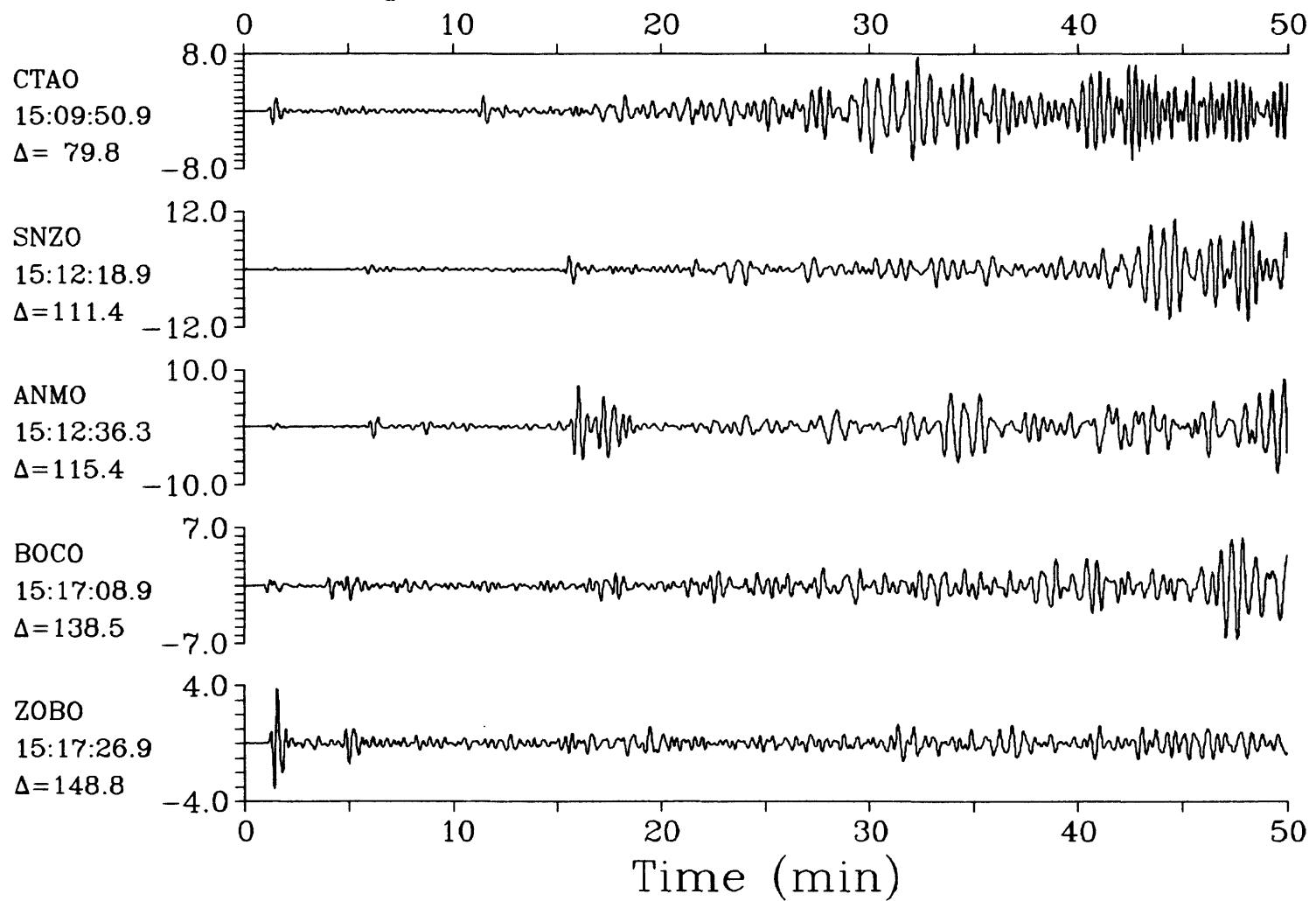
¹⁸LPZ

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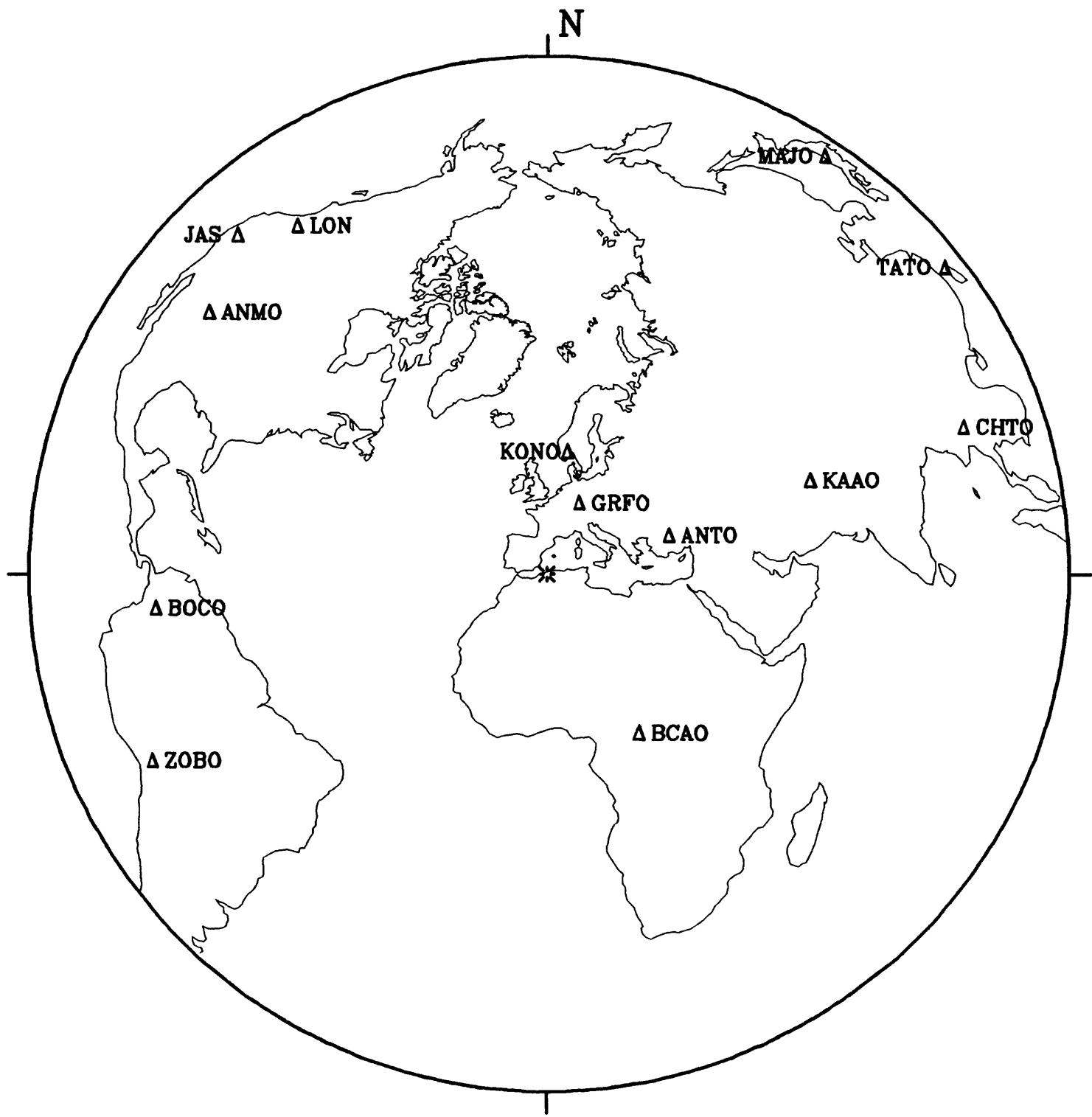


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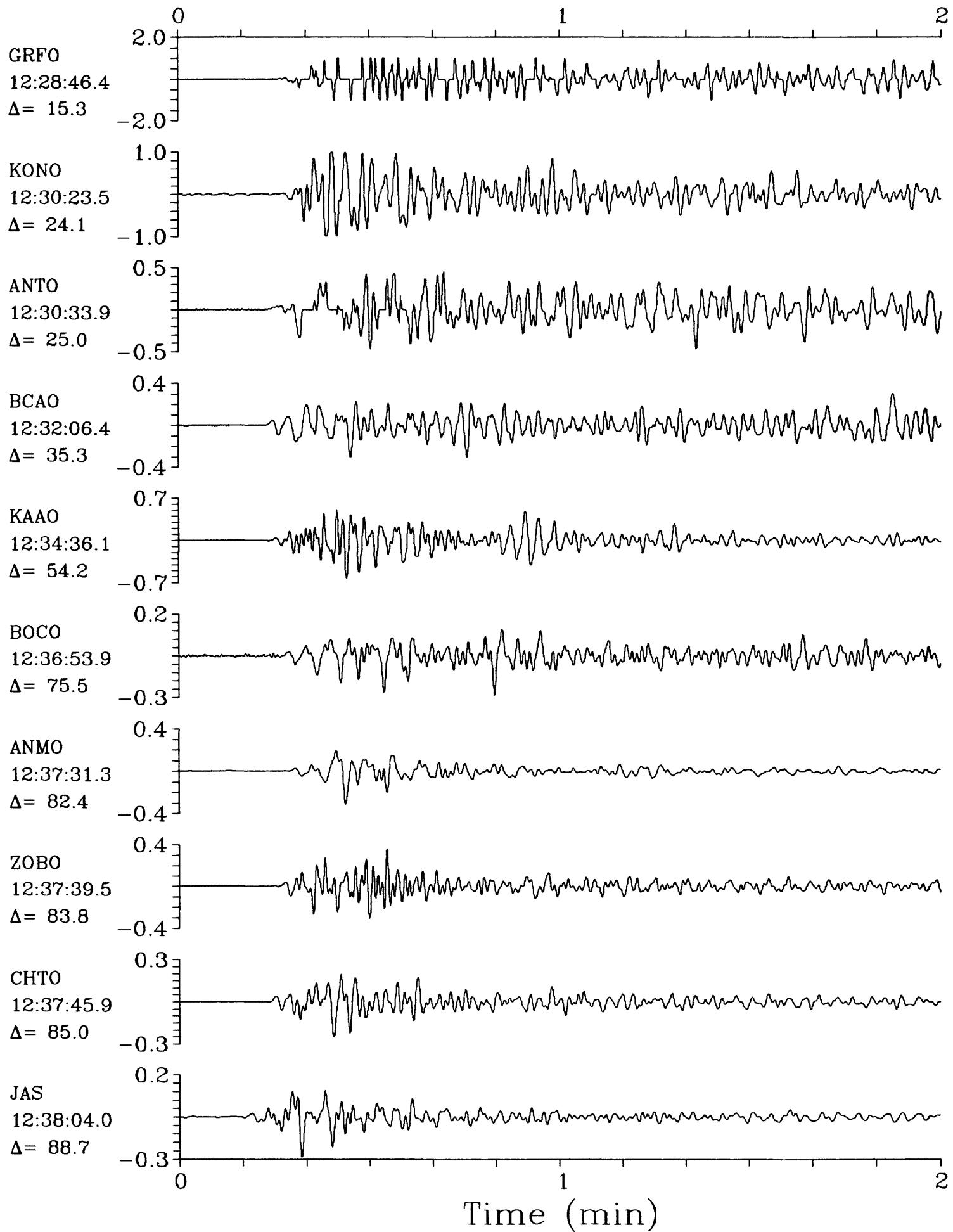
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10 October 1980 12:25:23.50

Algeria



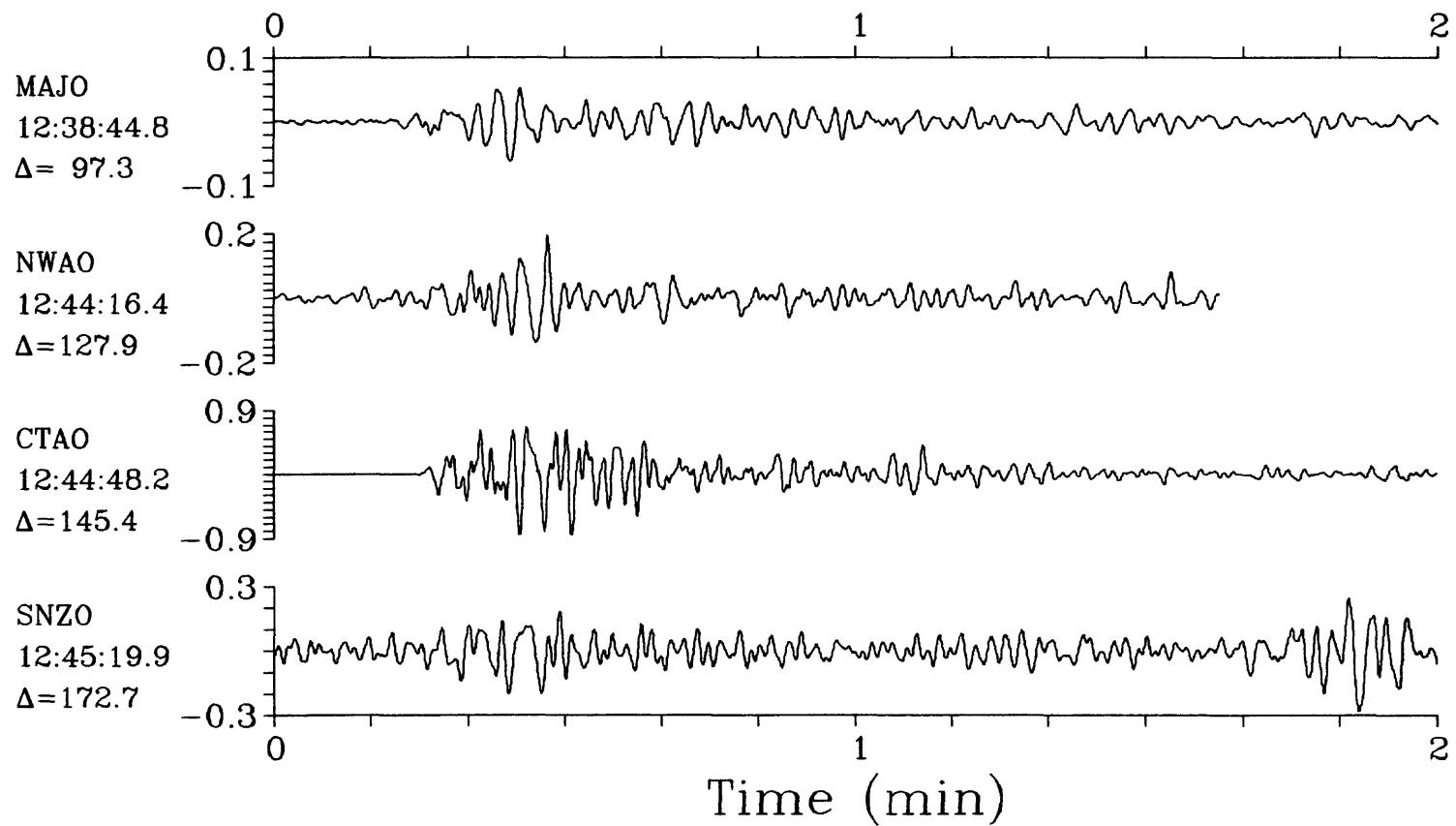
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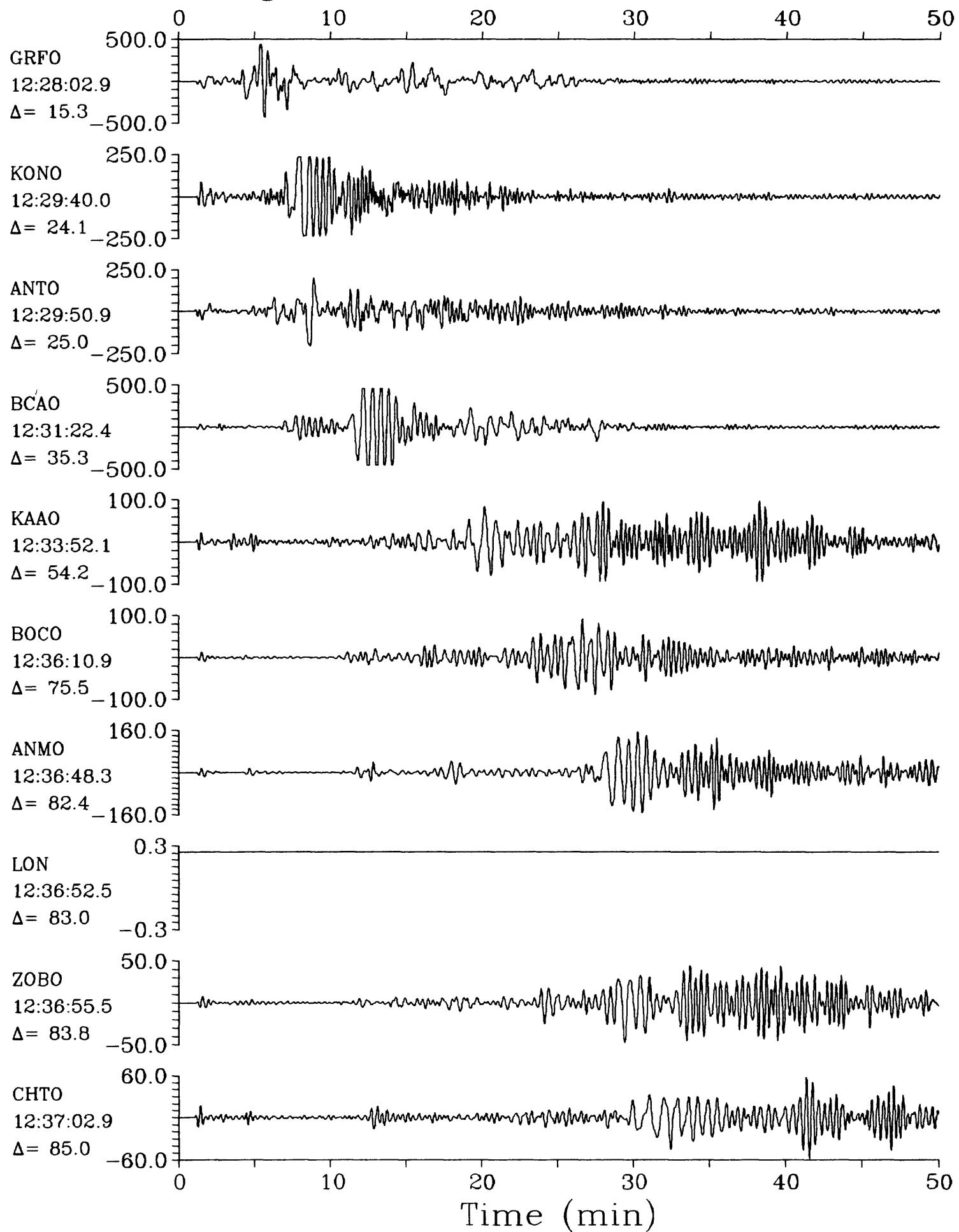
²² SPZ

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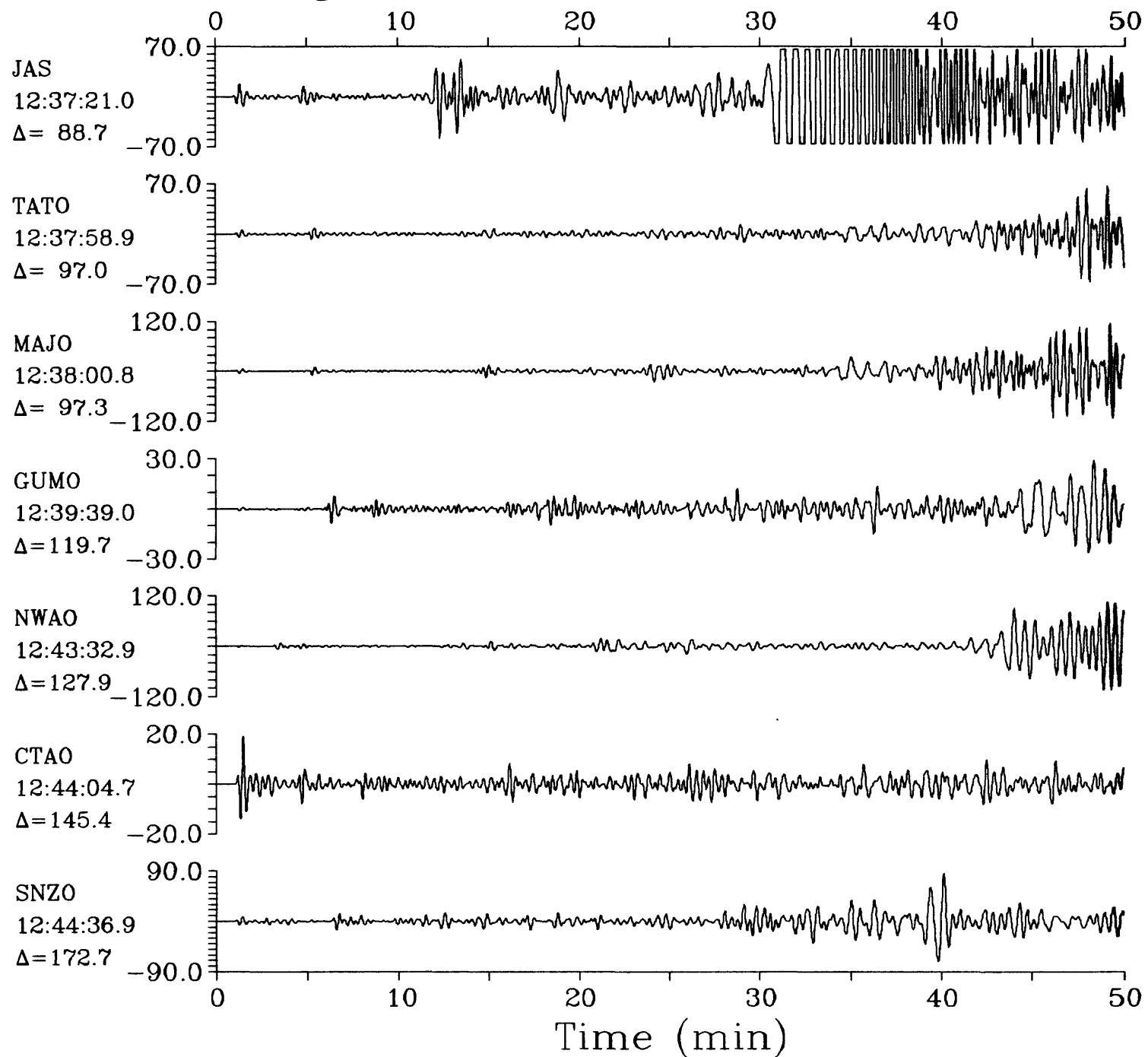


LPZ

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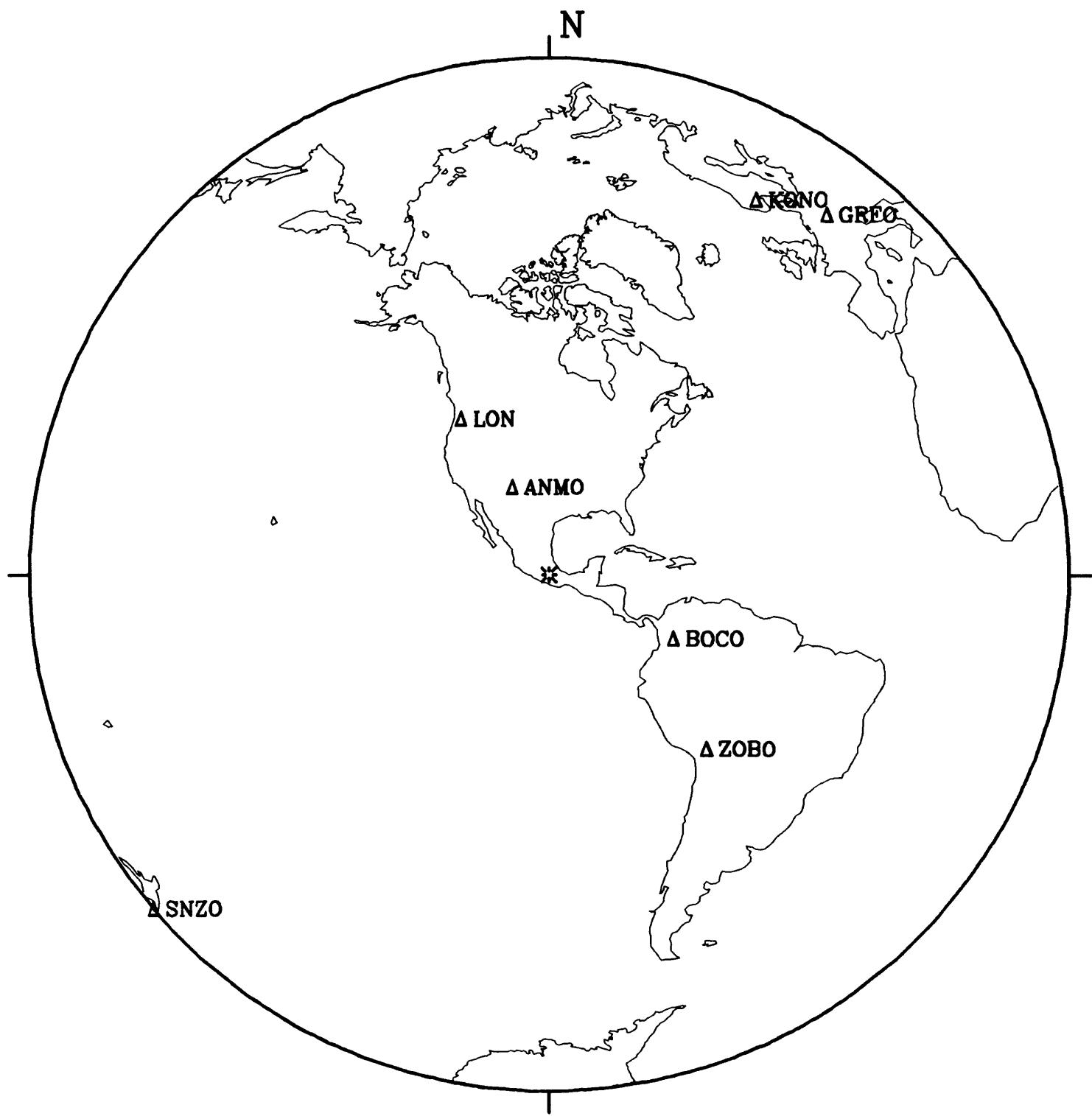
²⁴LPZ10 October 1980 12:25:23.50
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LPZ



24 October 1980 14:53:35.10

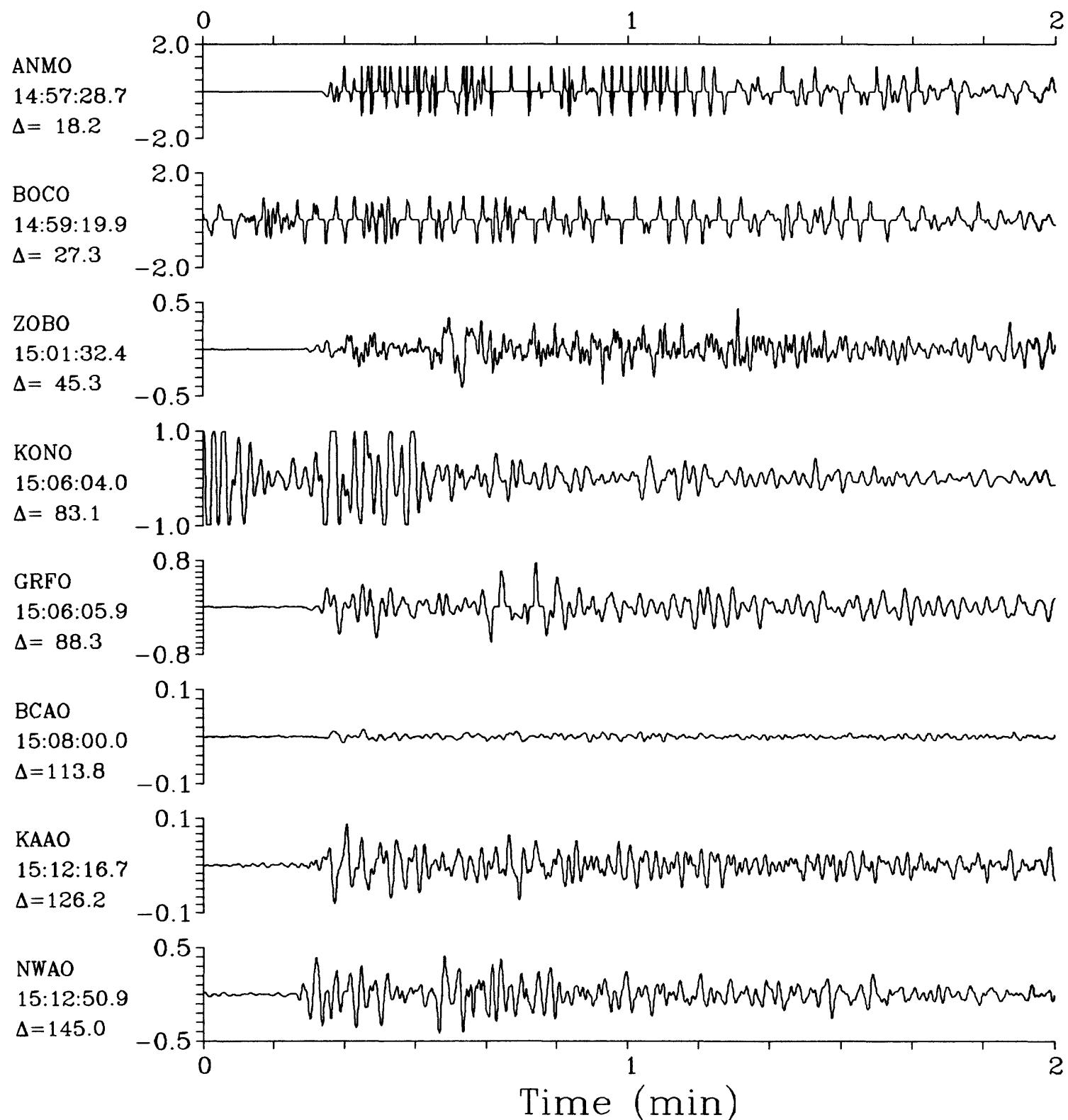
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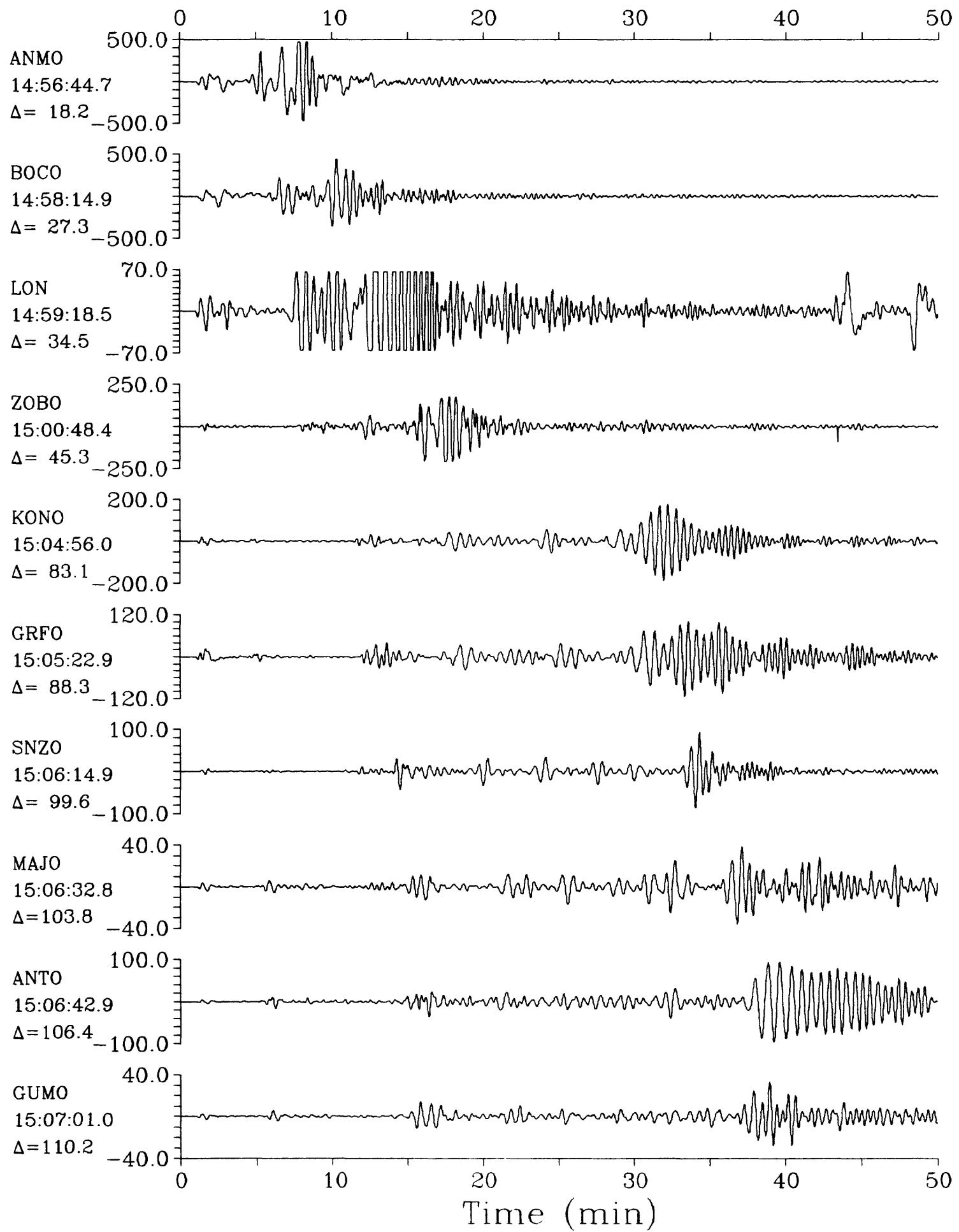
²⁶SPZ

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SPZ



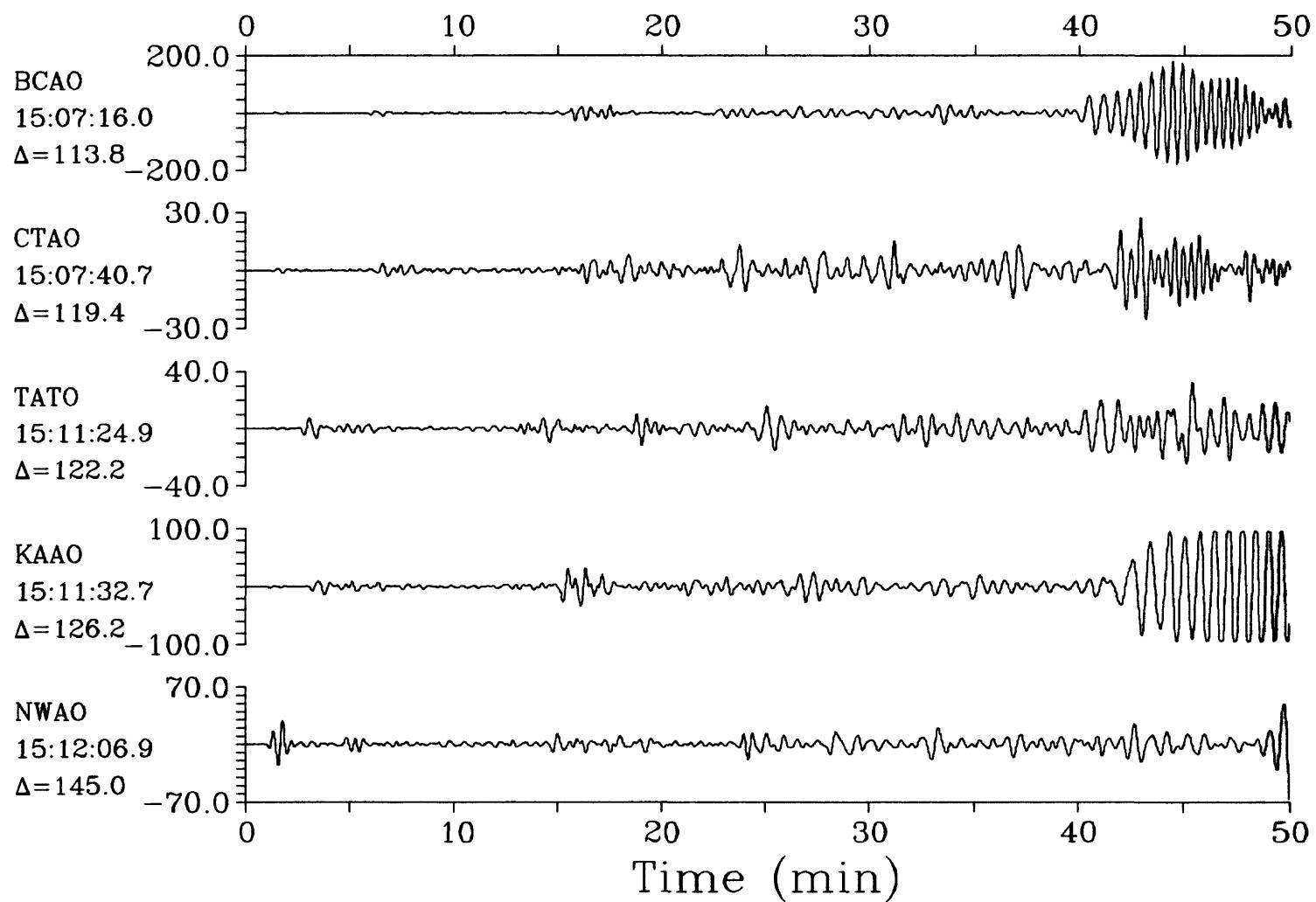
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²⁸ LPZ

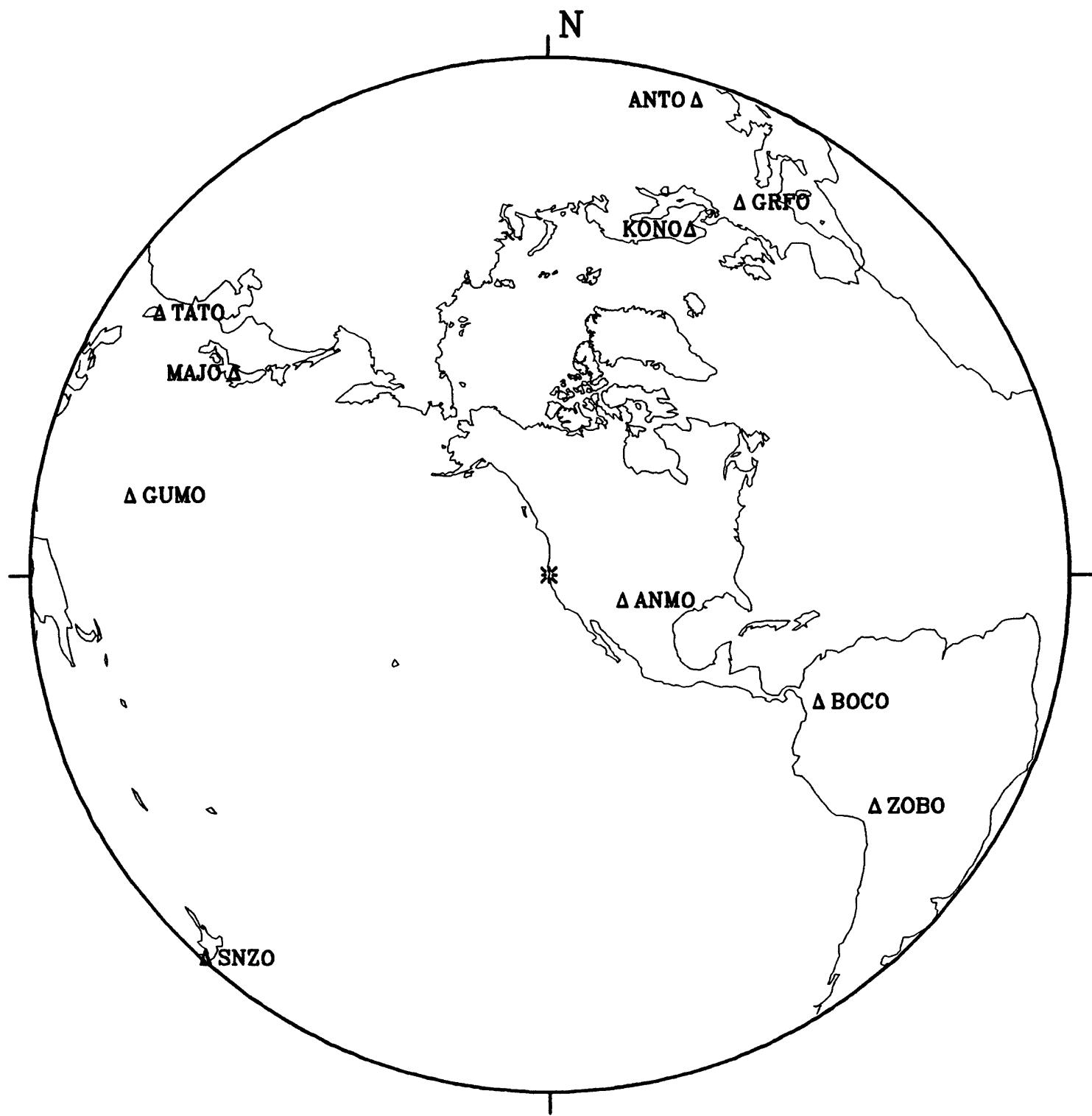
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LPZ



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Near Coast of Northern Calif.

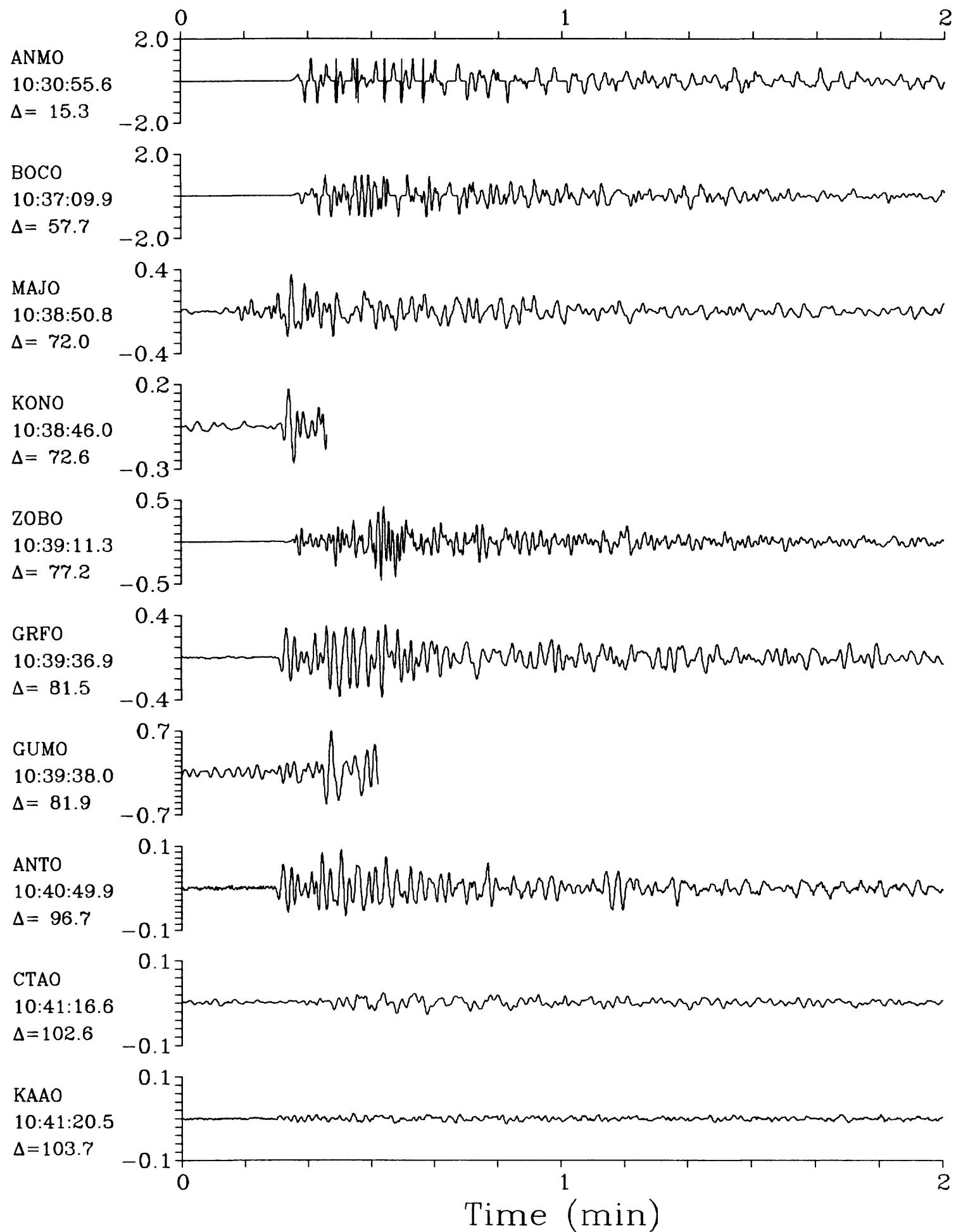


30 SPZ

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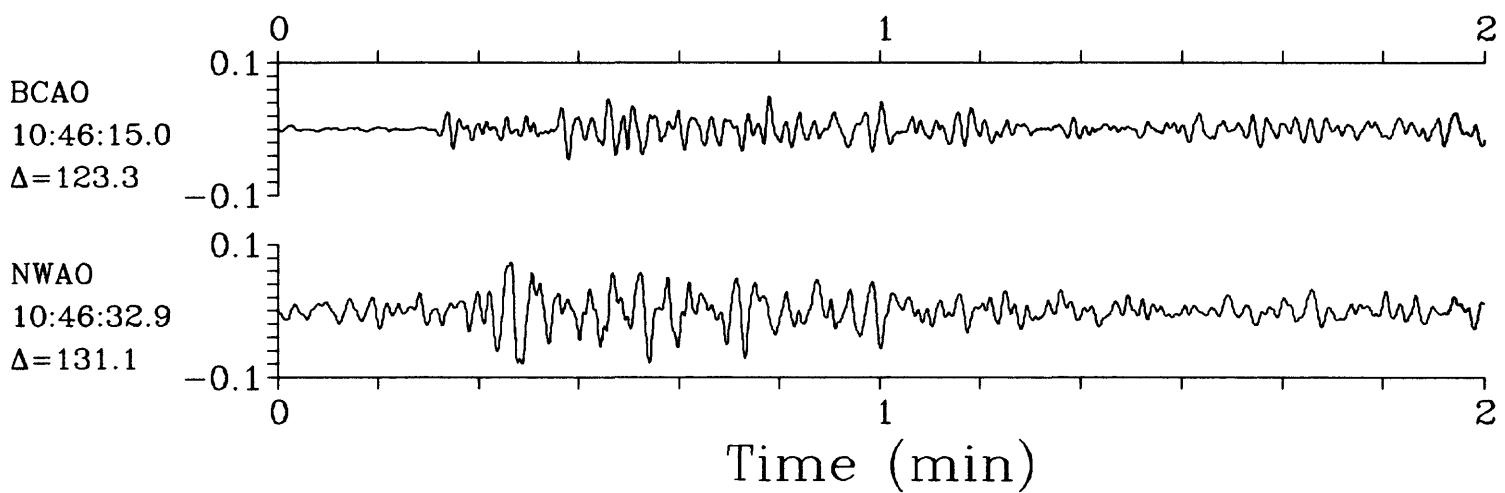
SPZ

Near Coast of Northern Calif. h=19.0 MB=6.2 ms=7.2



SPZ 08 November 1980 10:27:34.00
Near Coast of Northern Calif. h=19.0 MB=6.2 ms=7.2

SPZ³¹

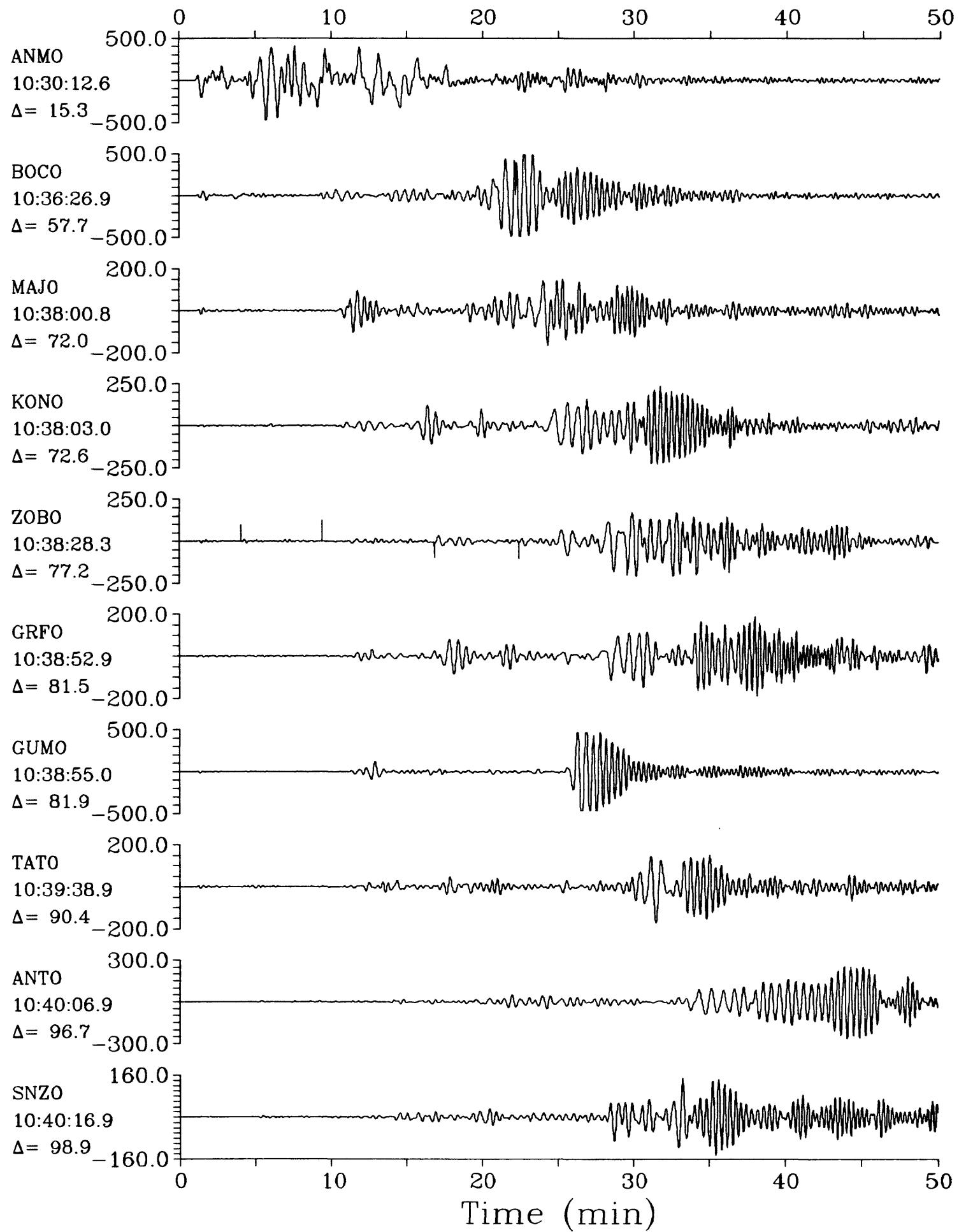


³² LPZ

08 November 1980 10:27:34.00

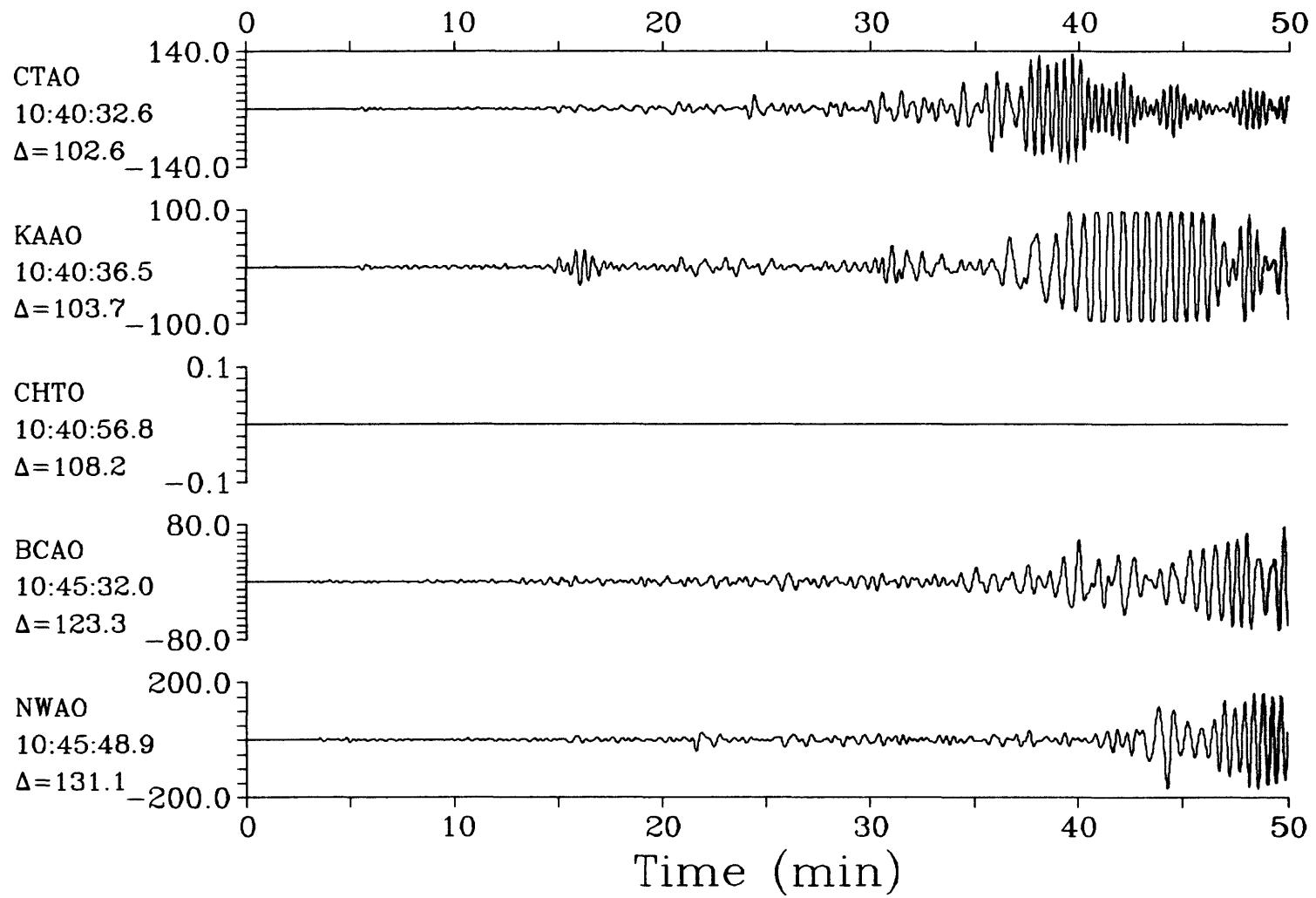
LPZ

Near Coast of Northern Calif. h=19.0 MB=6.2 ms=7.2



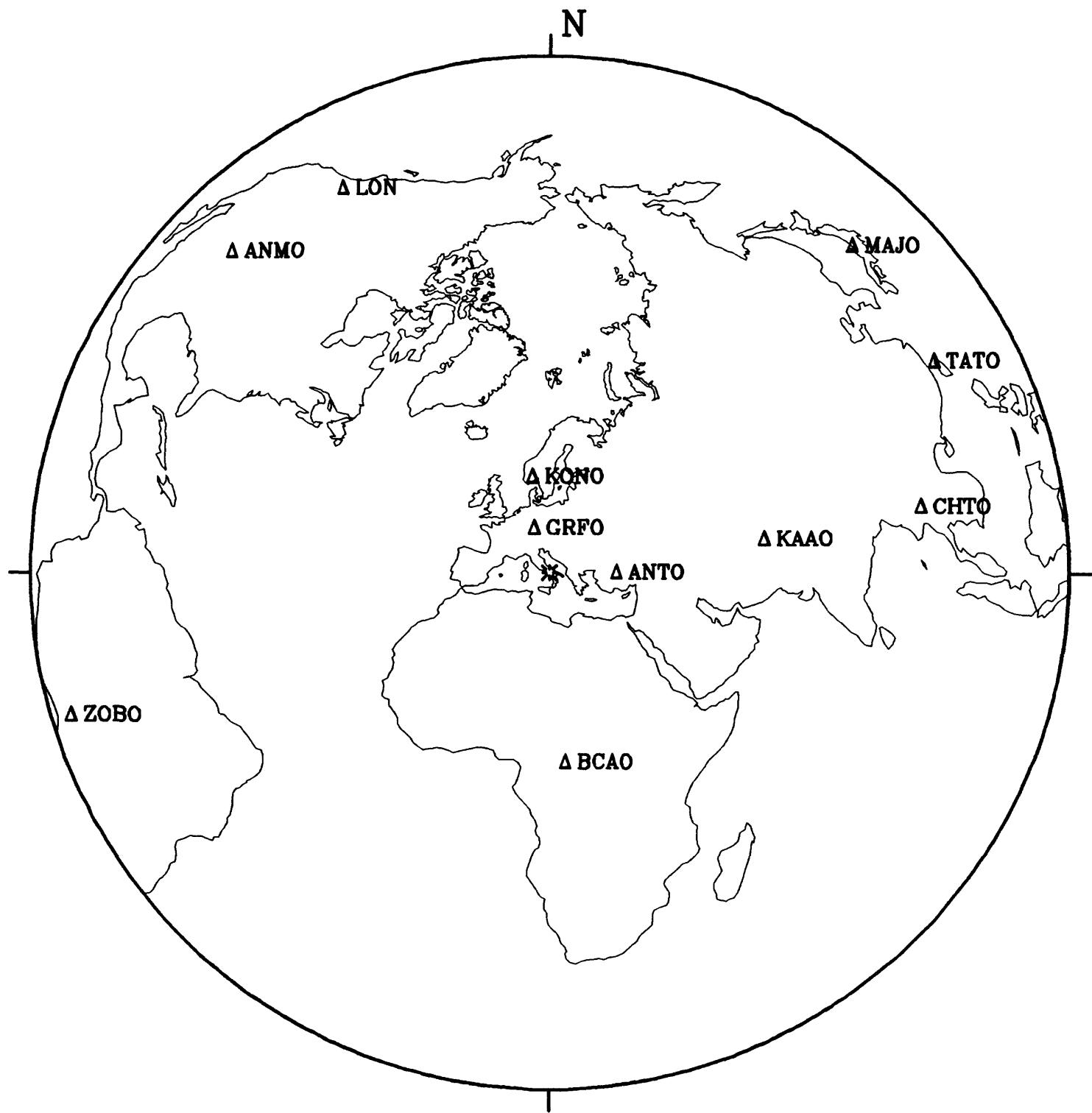
LPZ 08 November 1980 10:27:34.00 LPZ
Near Coast of Northern Calif. h=19.0 MB=6.2 ms=7.2

33

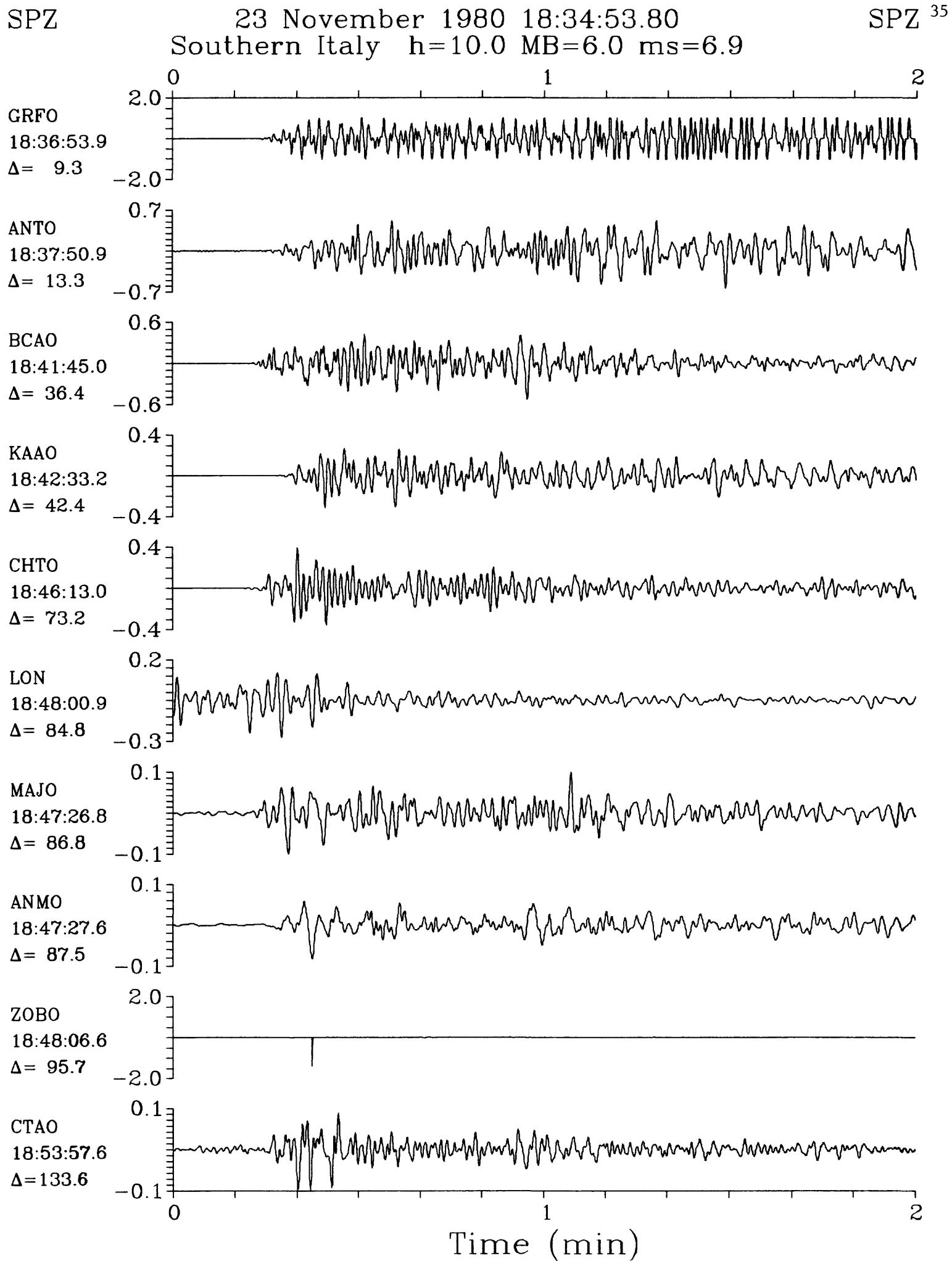


23 November 1980 18:34:53.80

Southern Italy



SPZ

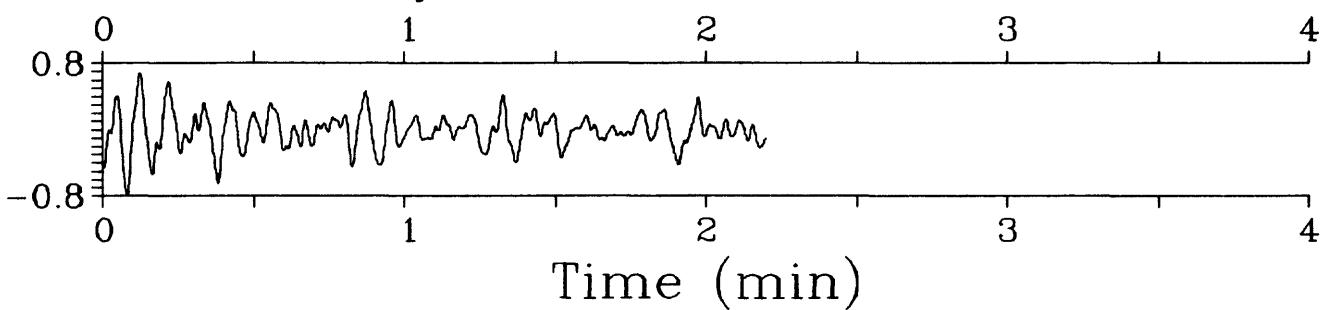


³⁶IPZ

23 November 1980 18:34:53.80
Southern Italy h=10.0 MB=6.0 ms=6.9

IPZ

LON
18:48:33.9
 $\Delta = 84.8$

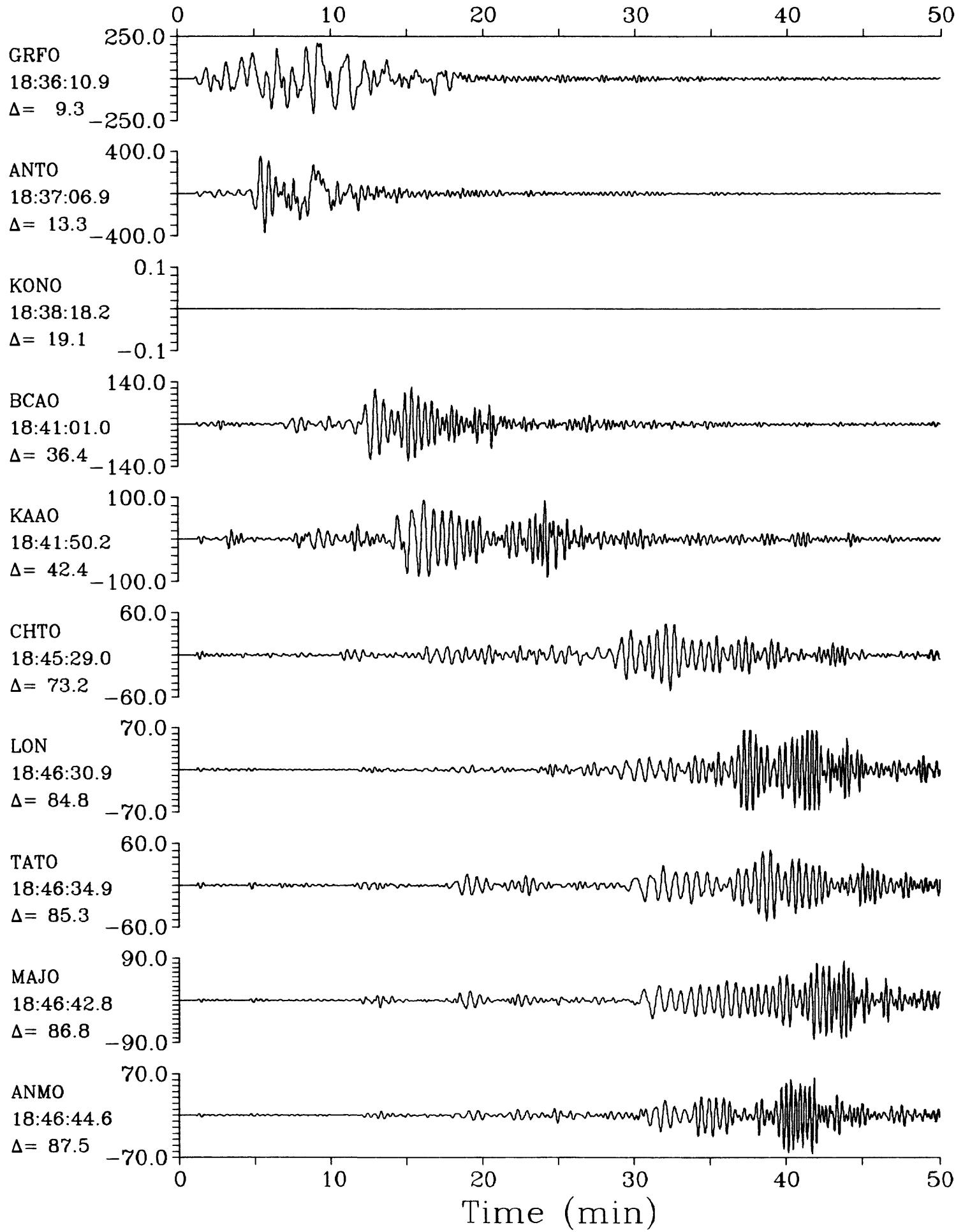


LPZ

23 November 1980 18:34:53.80

LPZ³⁷

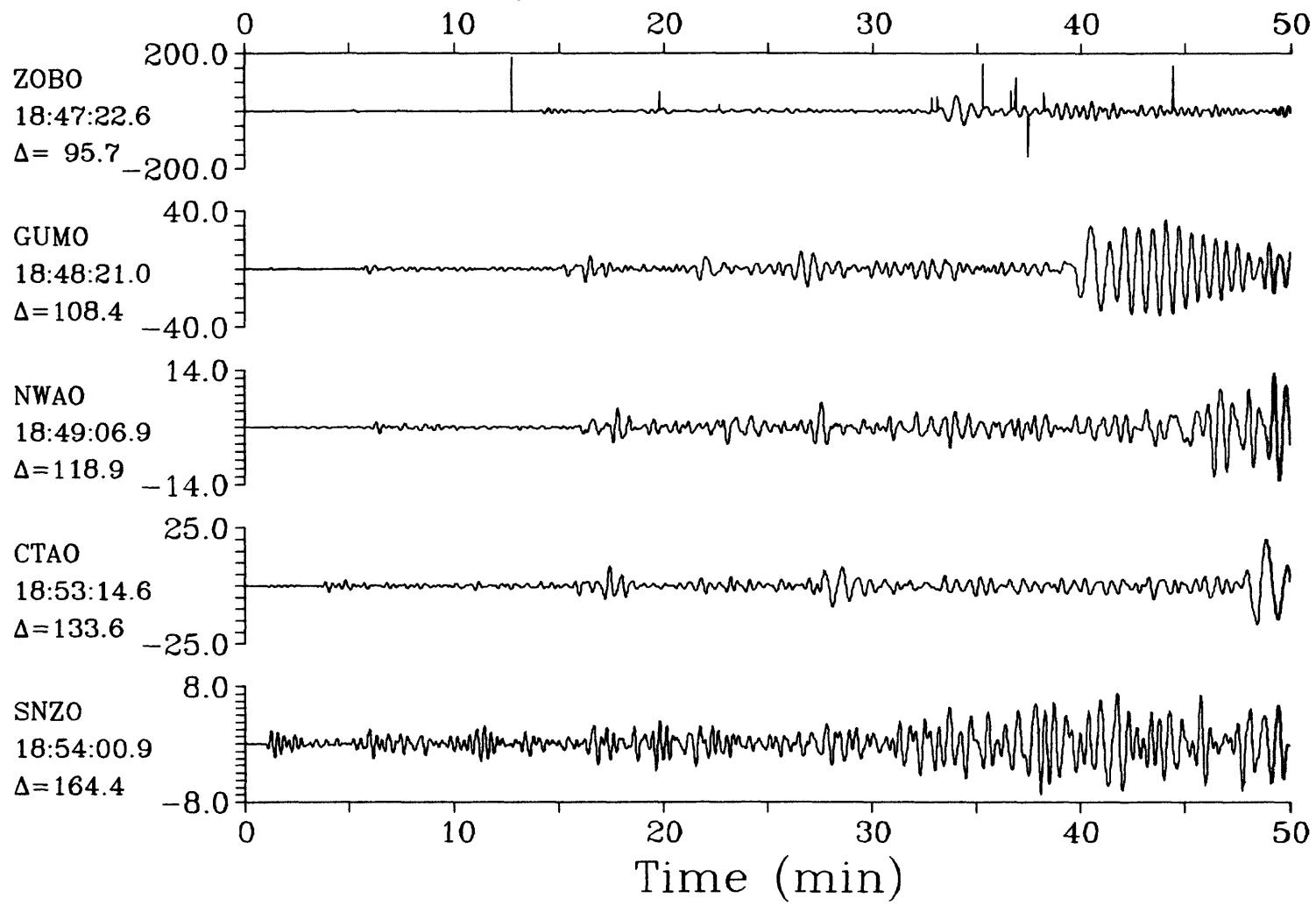
Southern Italy h=10.0 MB=6.0 ms=6.9



³⁸LPZ

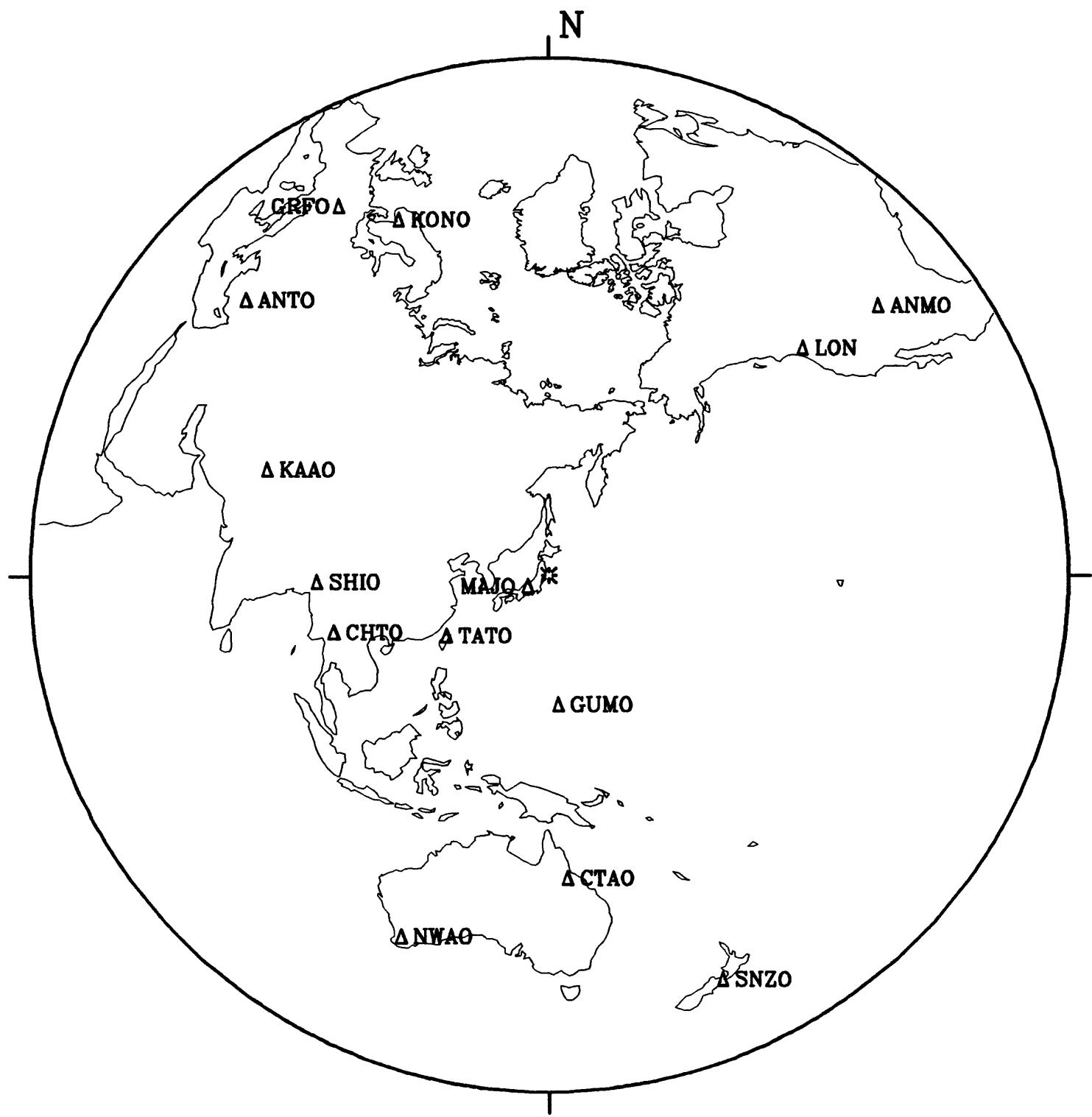
23 November 1980 18:34:53.80
Southern Italy h=10.0 MB=6.0 ms=6.9

LPZ



18 January 1981 18:17:24.40

Near East Coast of Honshu, Japan

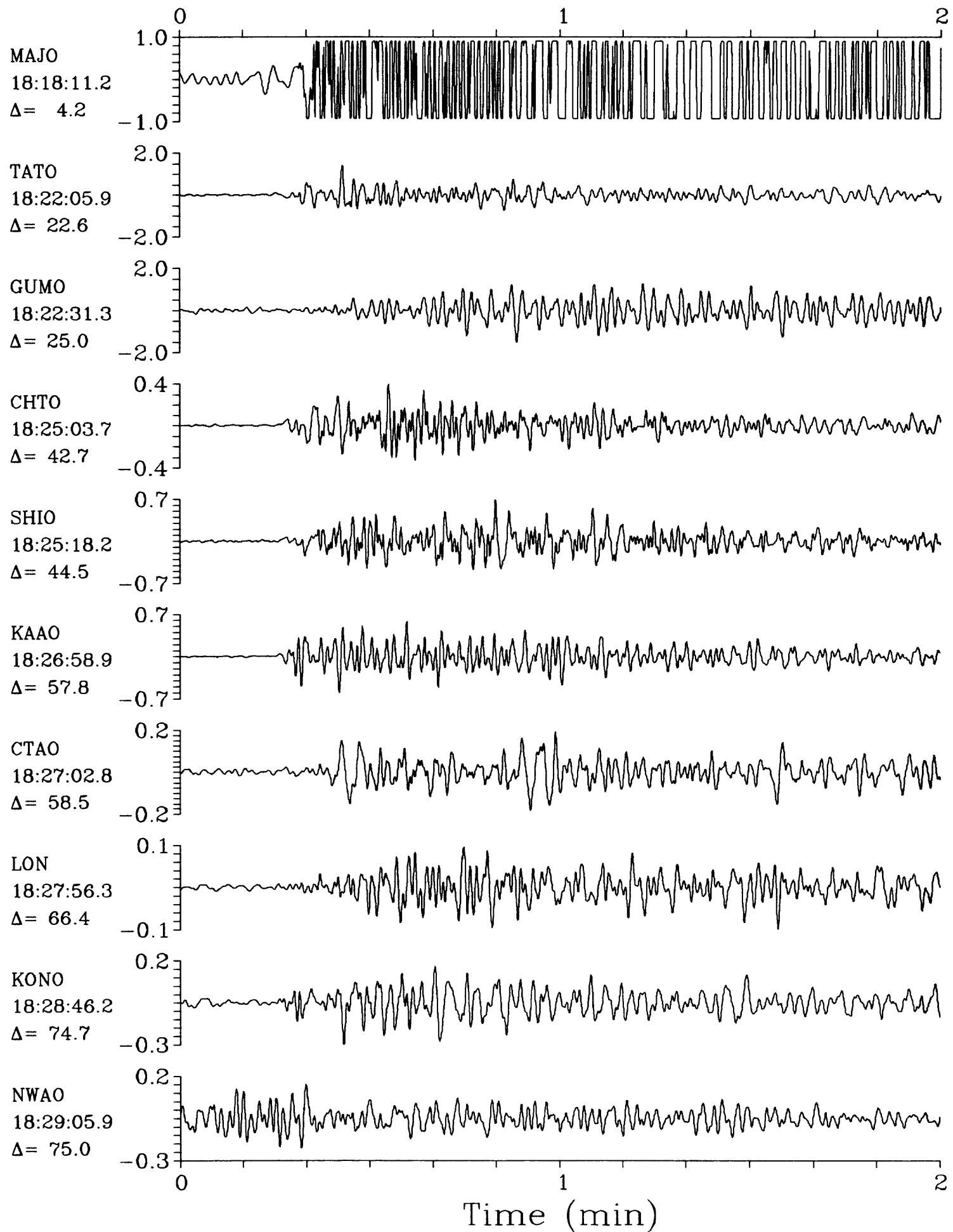


40 SPZ

18 January 1981 18:17:24.40

SPZ

Near East Coast of Honshu, Japan h=33.0 MB=6.1 ms=6.9

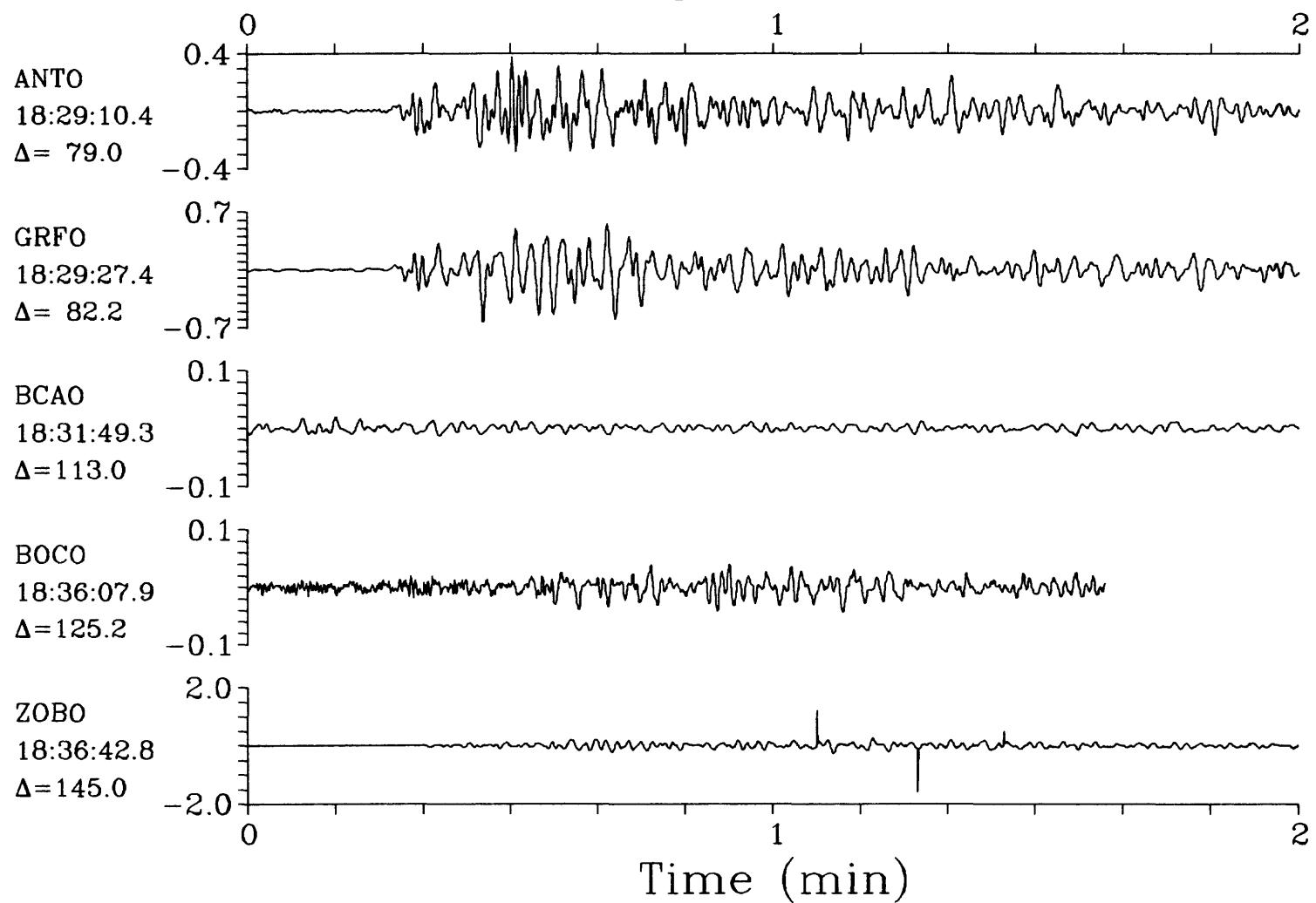


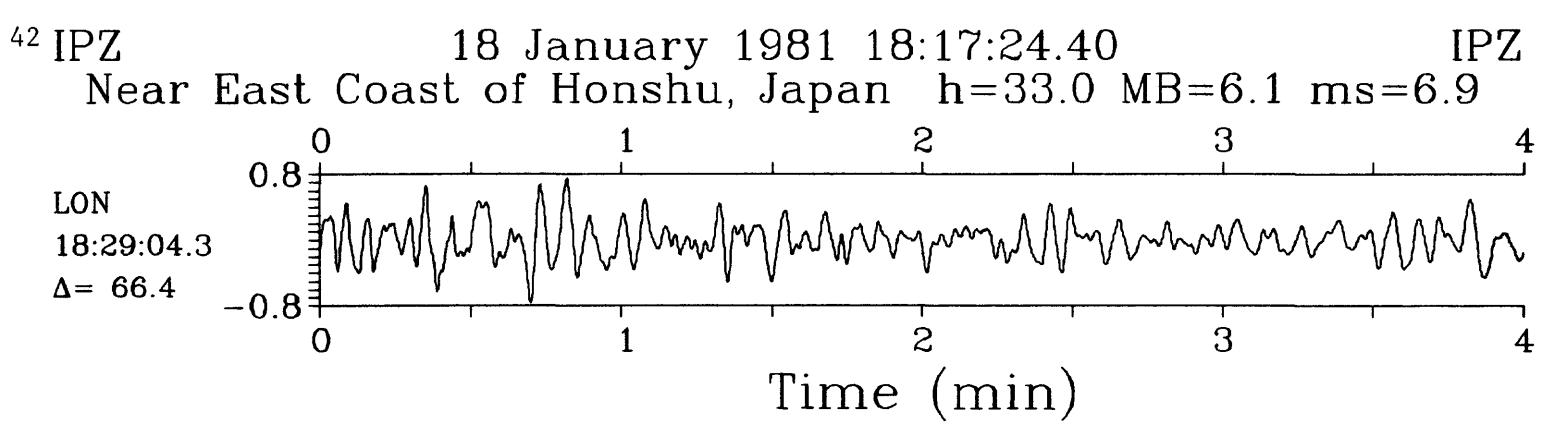
SPZ

18 January 1981 18:17:24.40

SPZ⁴¹

Near East Coast of Honshu, Japan h=33.0 MB=6.1 ms=6.9





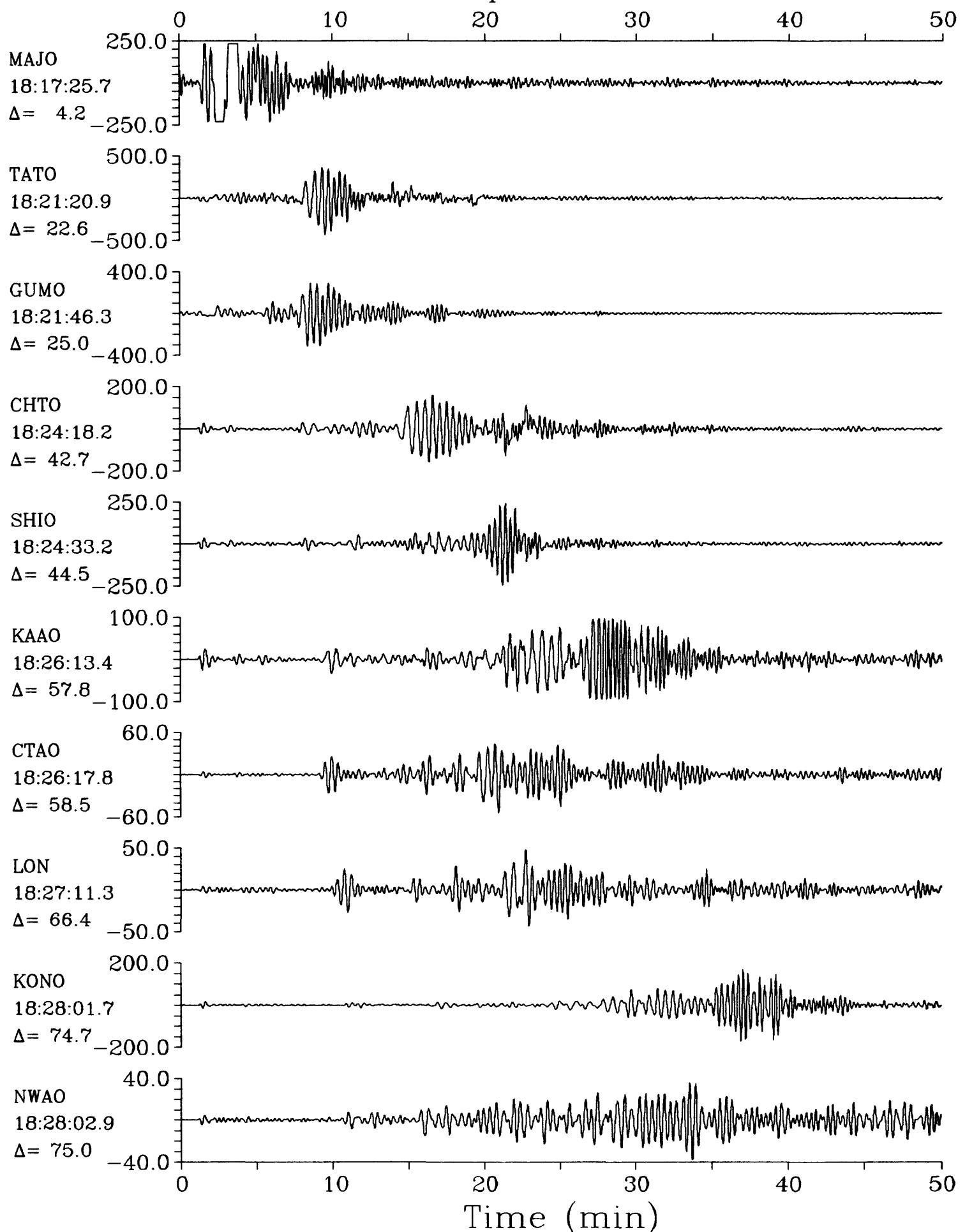
LPZ

18 January 1981 18:17:24.40

LPZ

Near East Coast of Honshu, Japan h=33.0 MB=6.1 ms=6.9

43

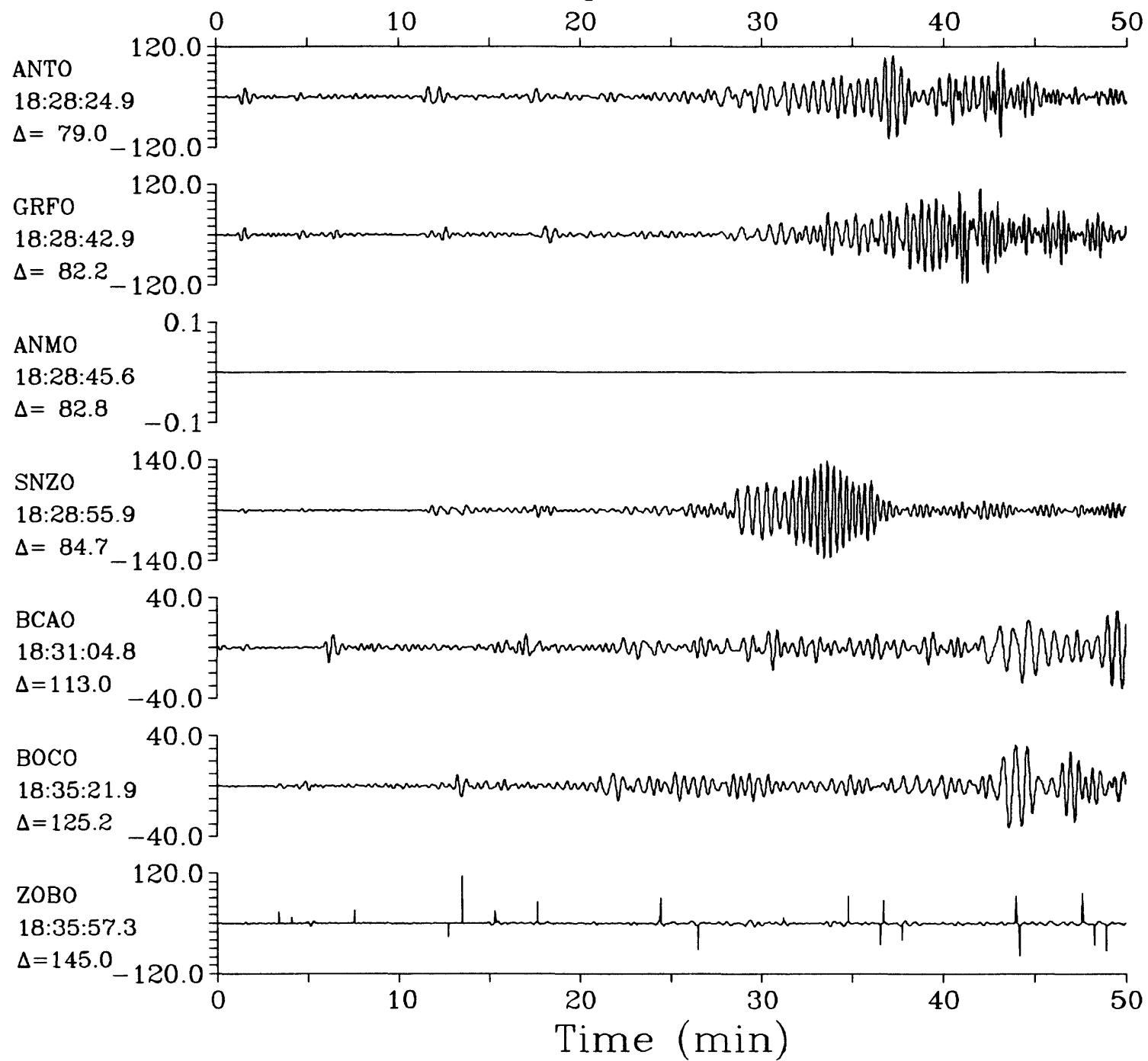


44 LPZ

18 January 1981 18:17:24.40

LPZ

Near East Coast of Honshu, Japan h=33.0 MB=6.1 ms=6.9



23 January 1981 21:13:51.70

Sichuan Province, China

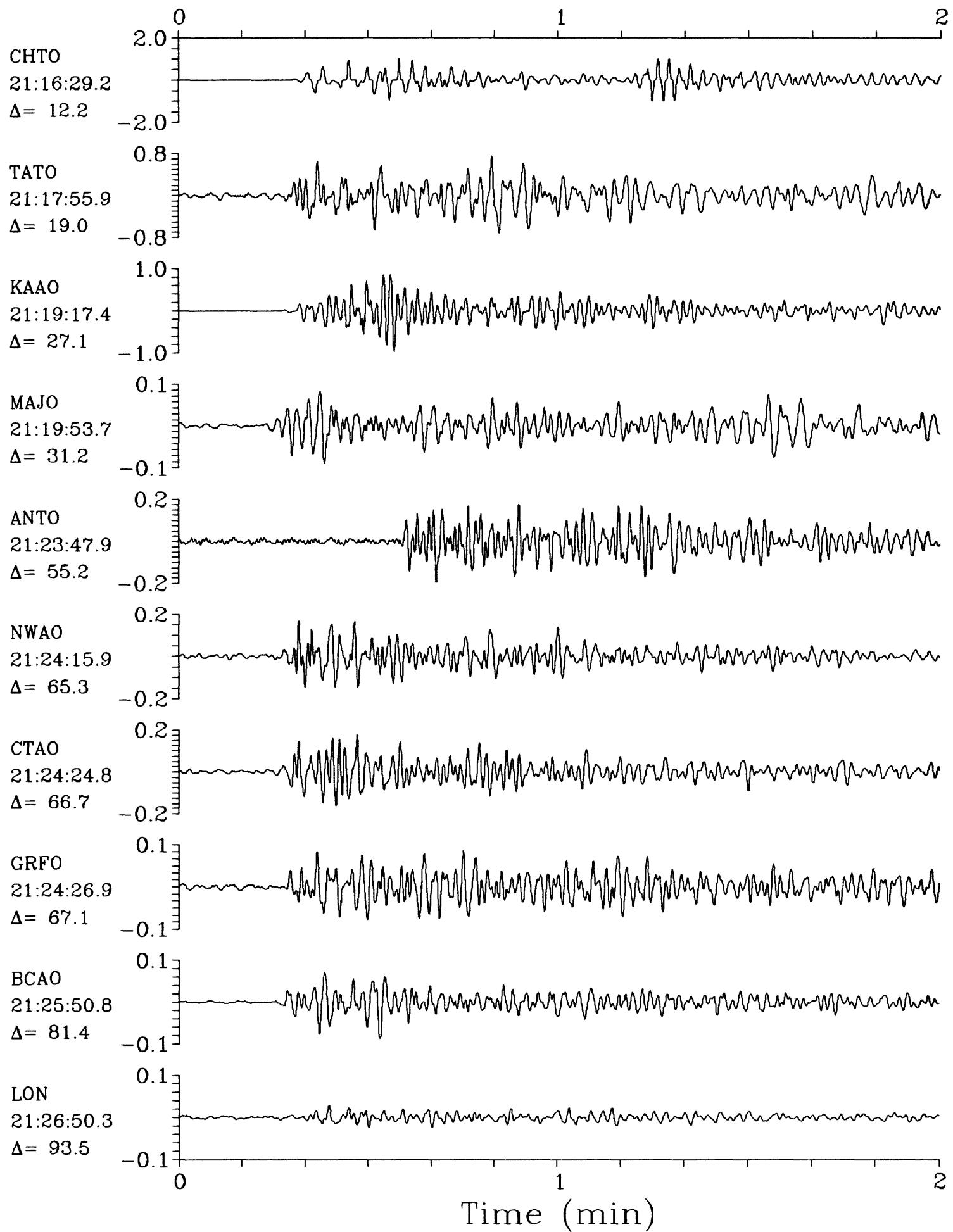


46 SPZ

23 January 1981 21:13:51.70

SPZ

Sichuan Province, China h=33.0 MB=5.7 ms=6.8

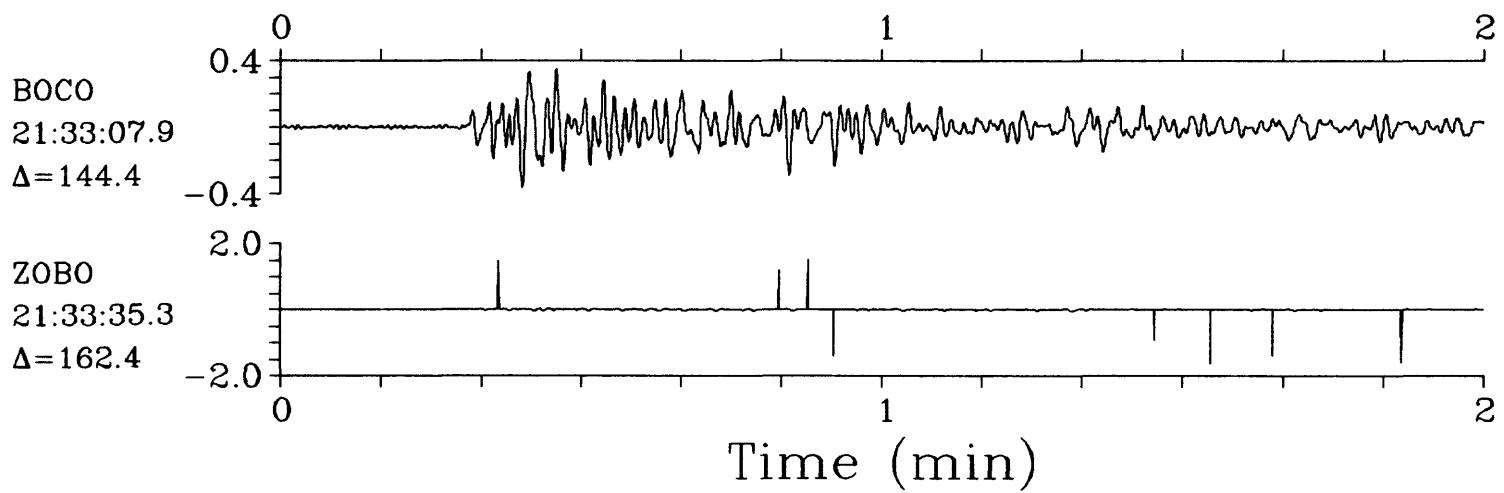


SPZ

23 January 1981 21:13:51.70

SPZ⁴⁷

Sichuan Province, China h=33.0 MB=5.7 ms=6.8

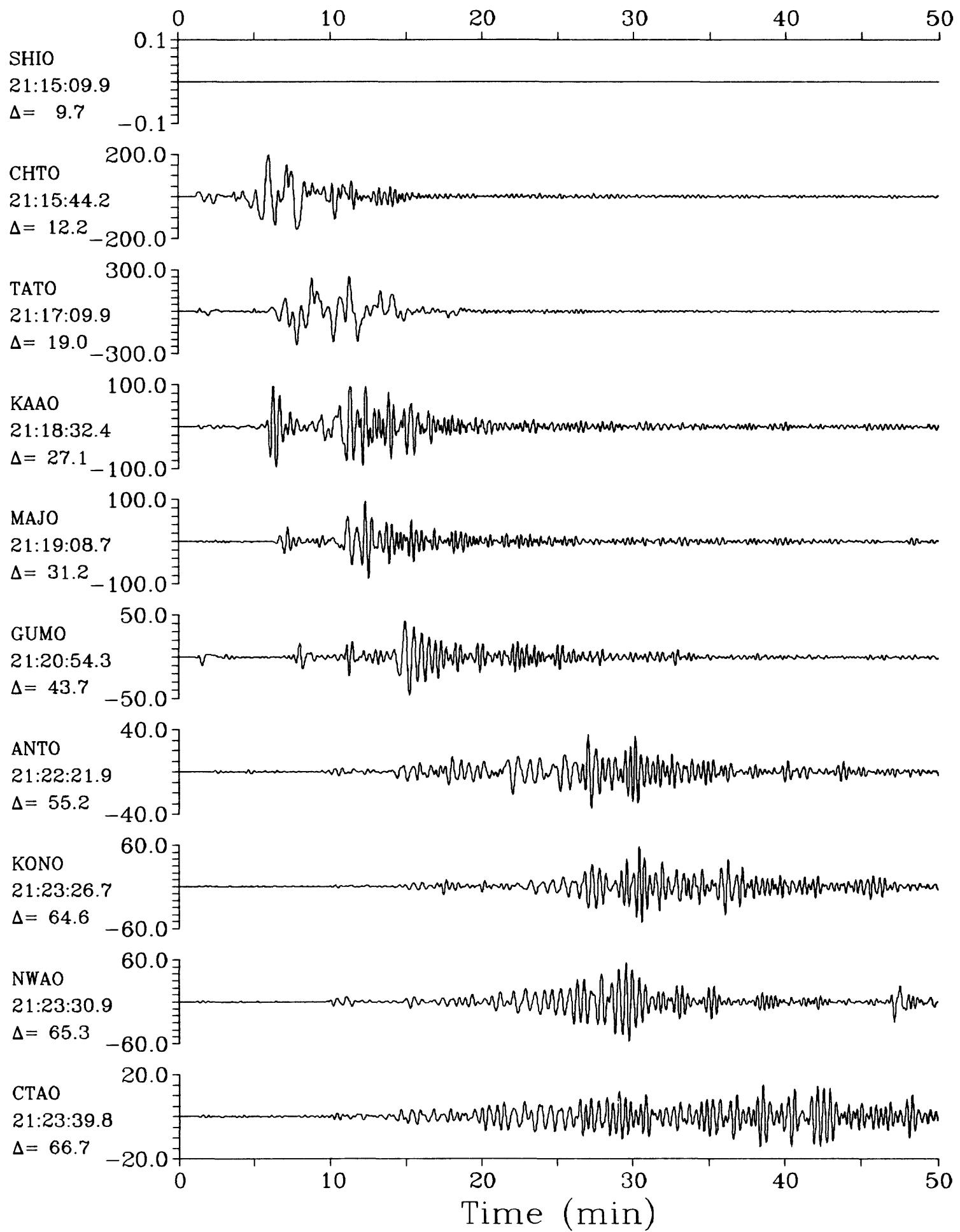


48 LPZ

23 January 1981 21:13:51.70

LPZ

Sichuan Province, China h=33.0 MB=5.7 ms=6.8

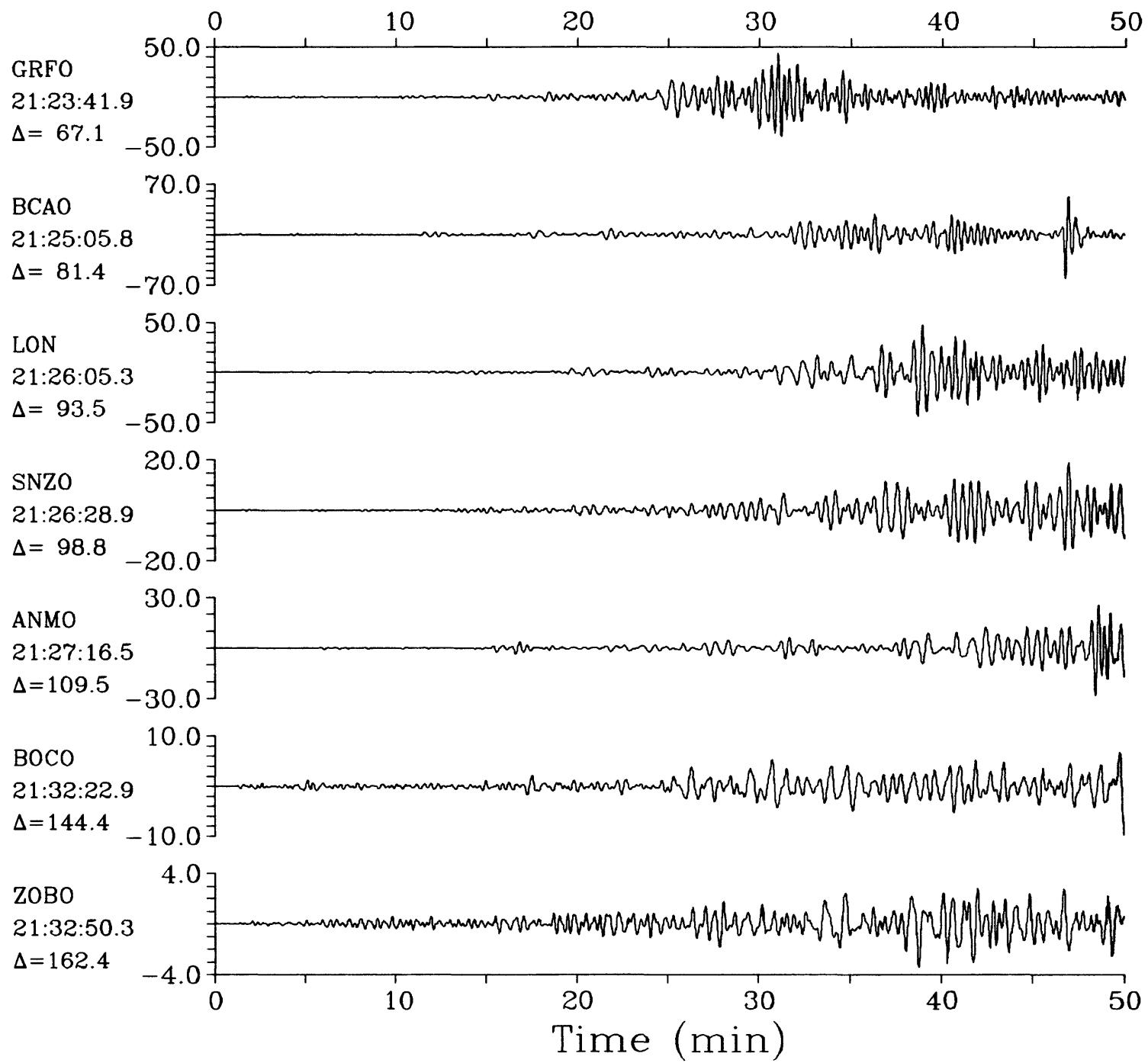


LPZ

23 January 1981 21:13:51.70

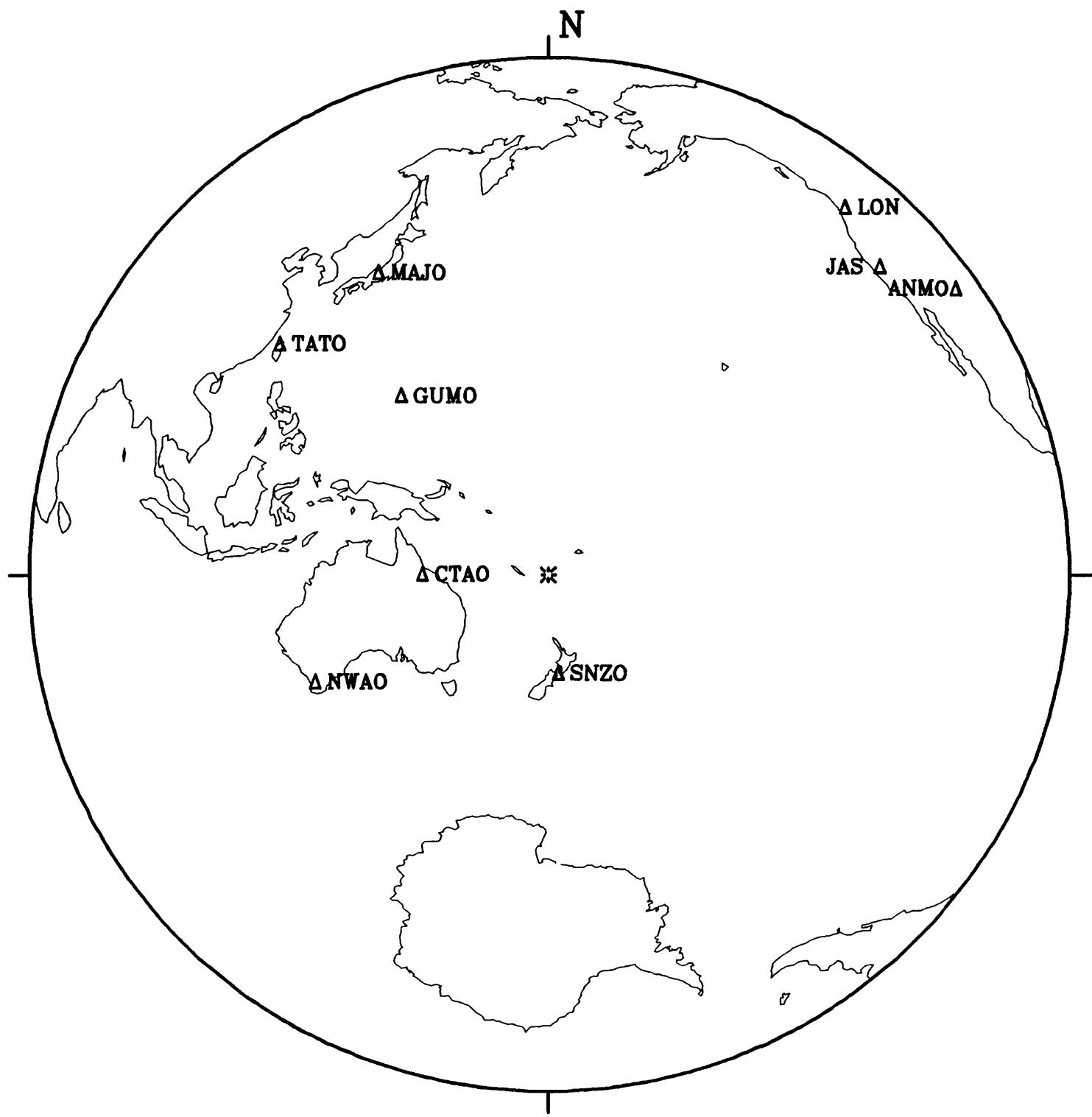
LPZ⁴⁹

Sichuan Province, China h=33.0 MB=5.7 ms=6.8



06 July 1981 03:08:24.18

Loyalty Islands Region

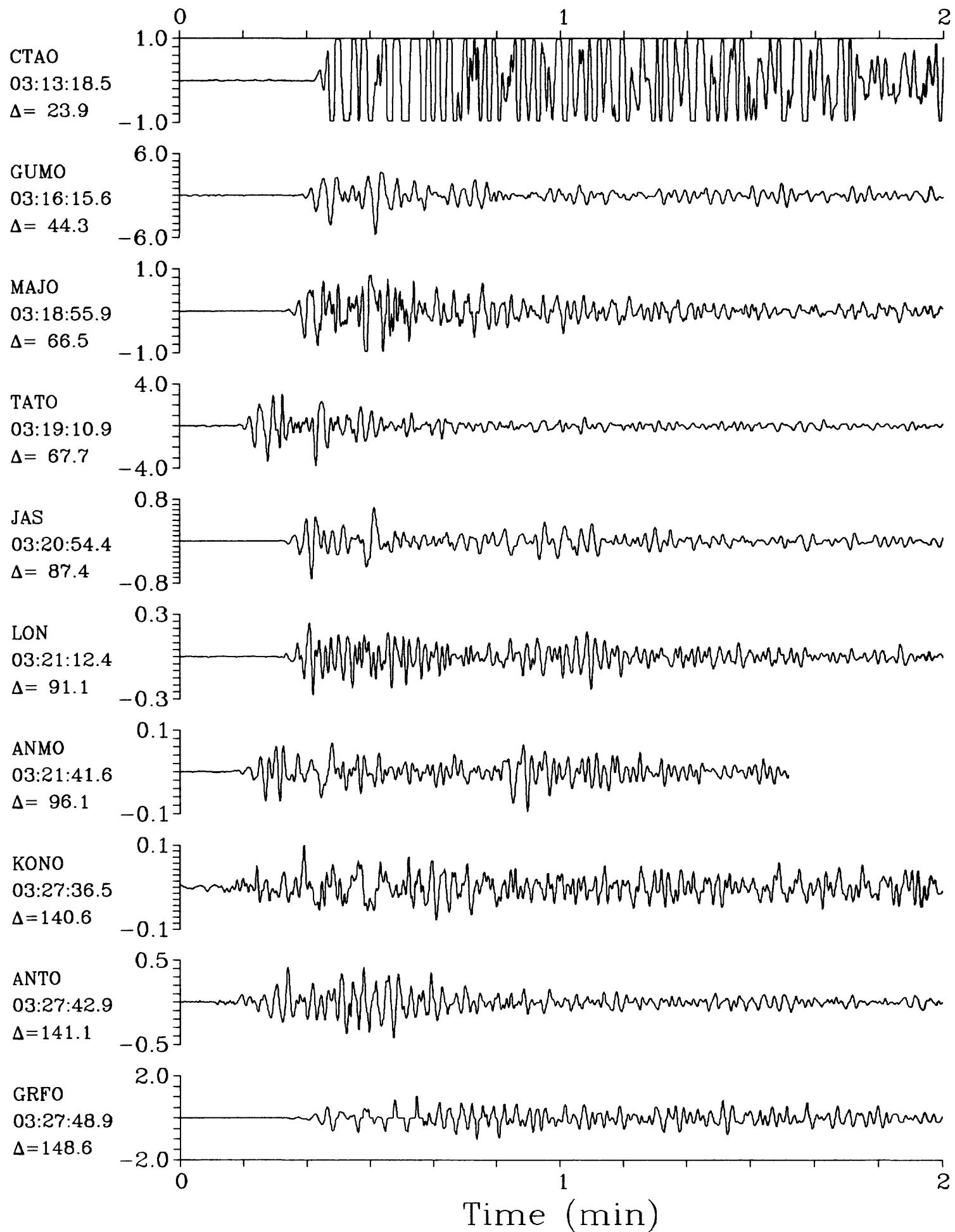


SPZ

06 July 1981 03:08:24.18

SPZ⁵¹

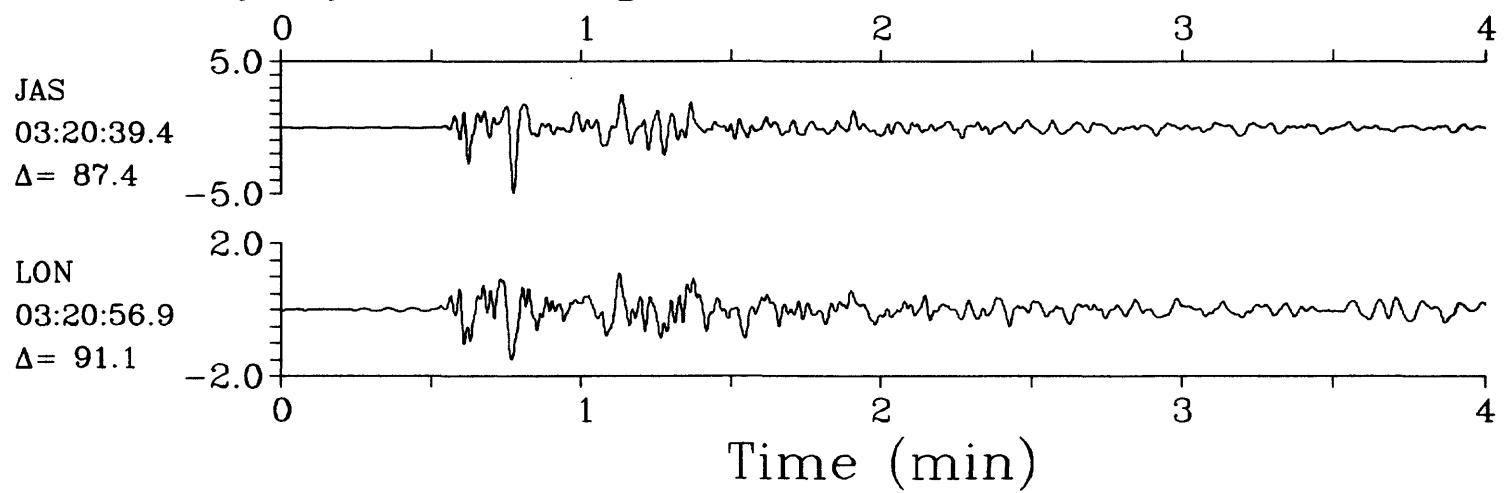
Loyalty Islands Region h=33.0 MB=6.9 ms=7.0



⁵² IPZ

06 July 1981 03:08:24.18
Loyalty Islands Region h=33.0 MB=6.9 ms=7.0

IPZ



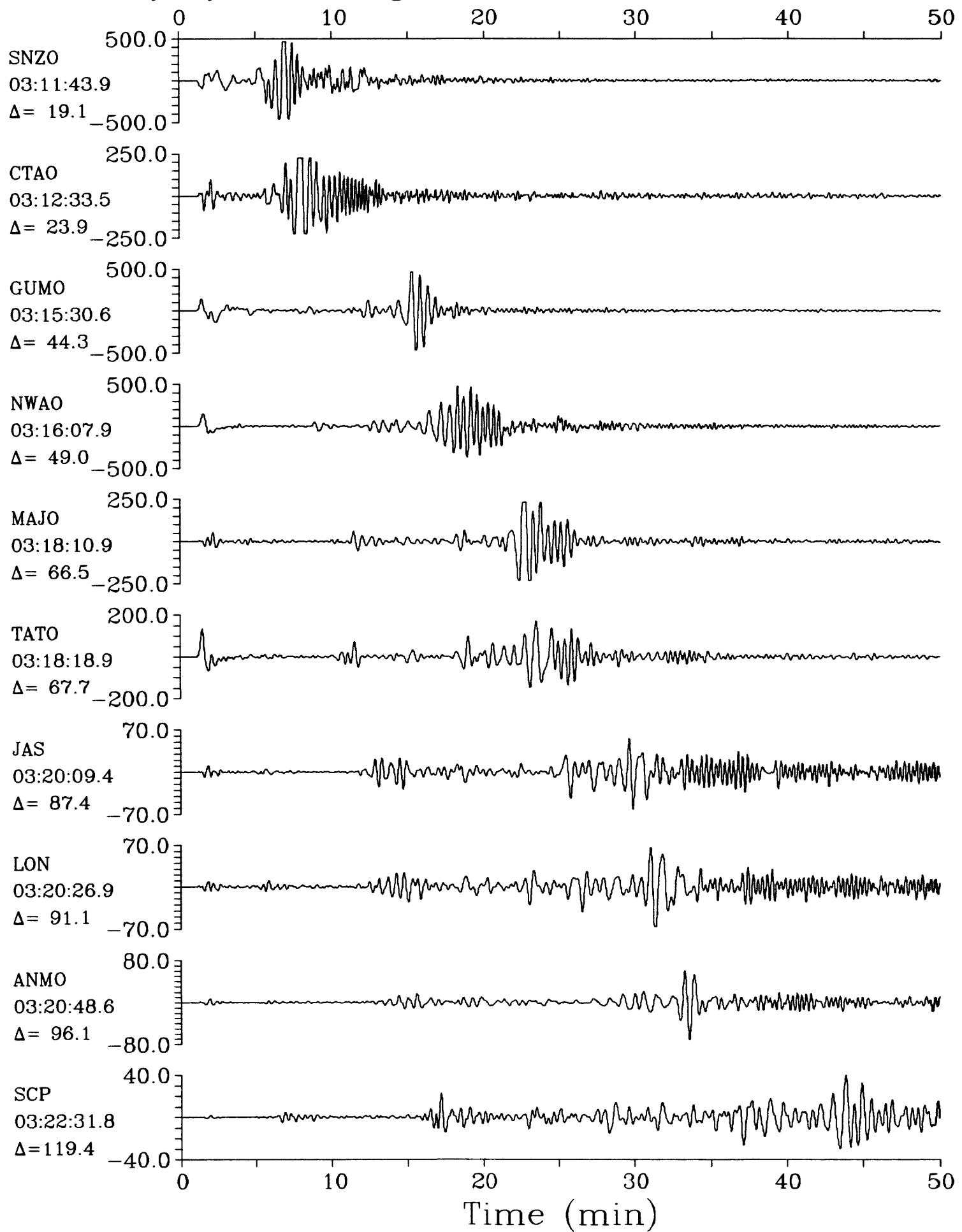
LPZ

06 July 1981 03:08:24.18

LPZ

53

Loyalty Islands Region h=33.0 MB=6.9 ms=7.0

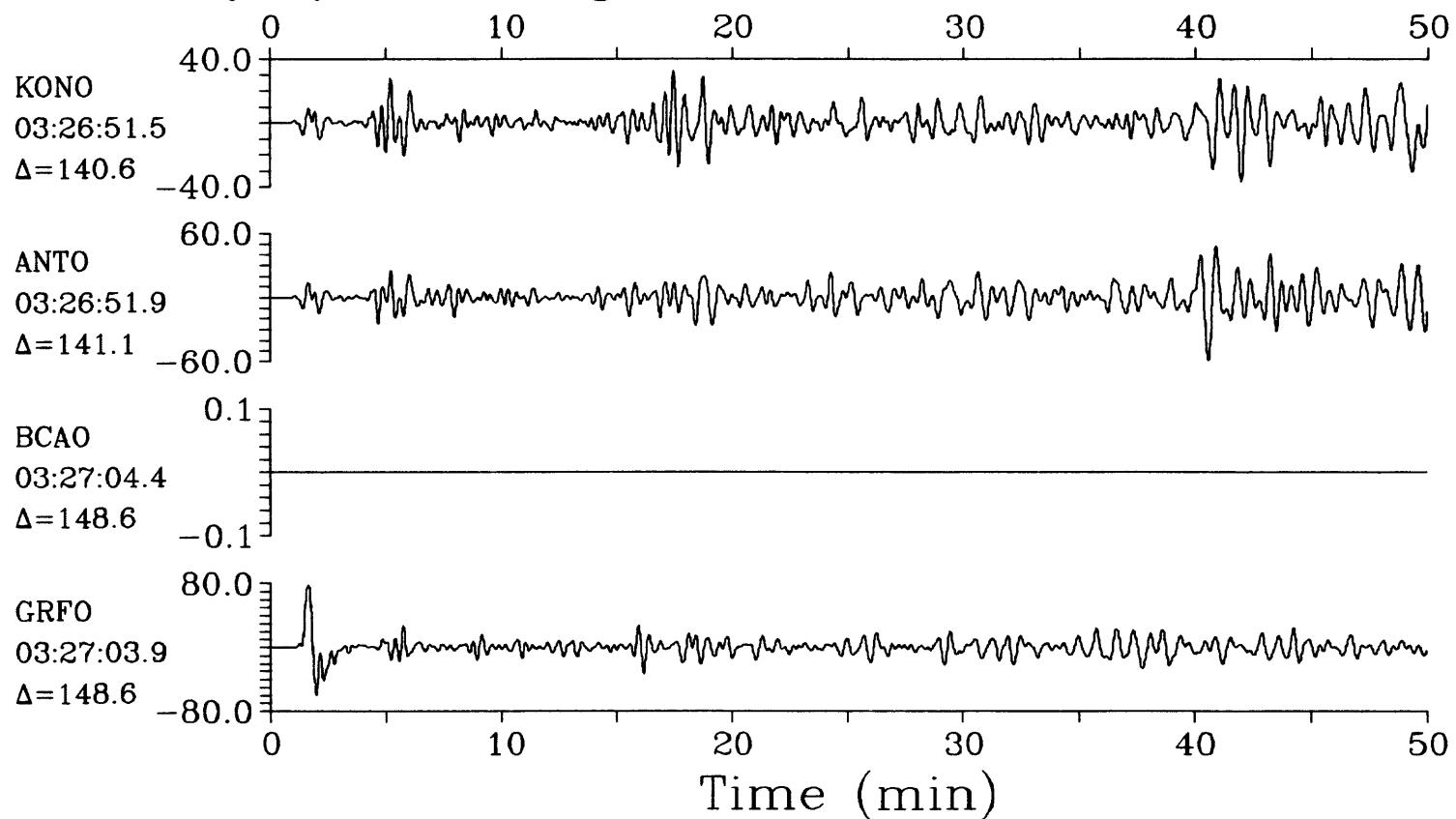


54 LPZ

06 July 1981 03:08:24.18

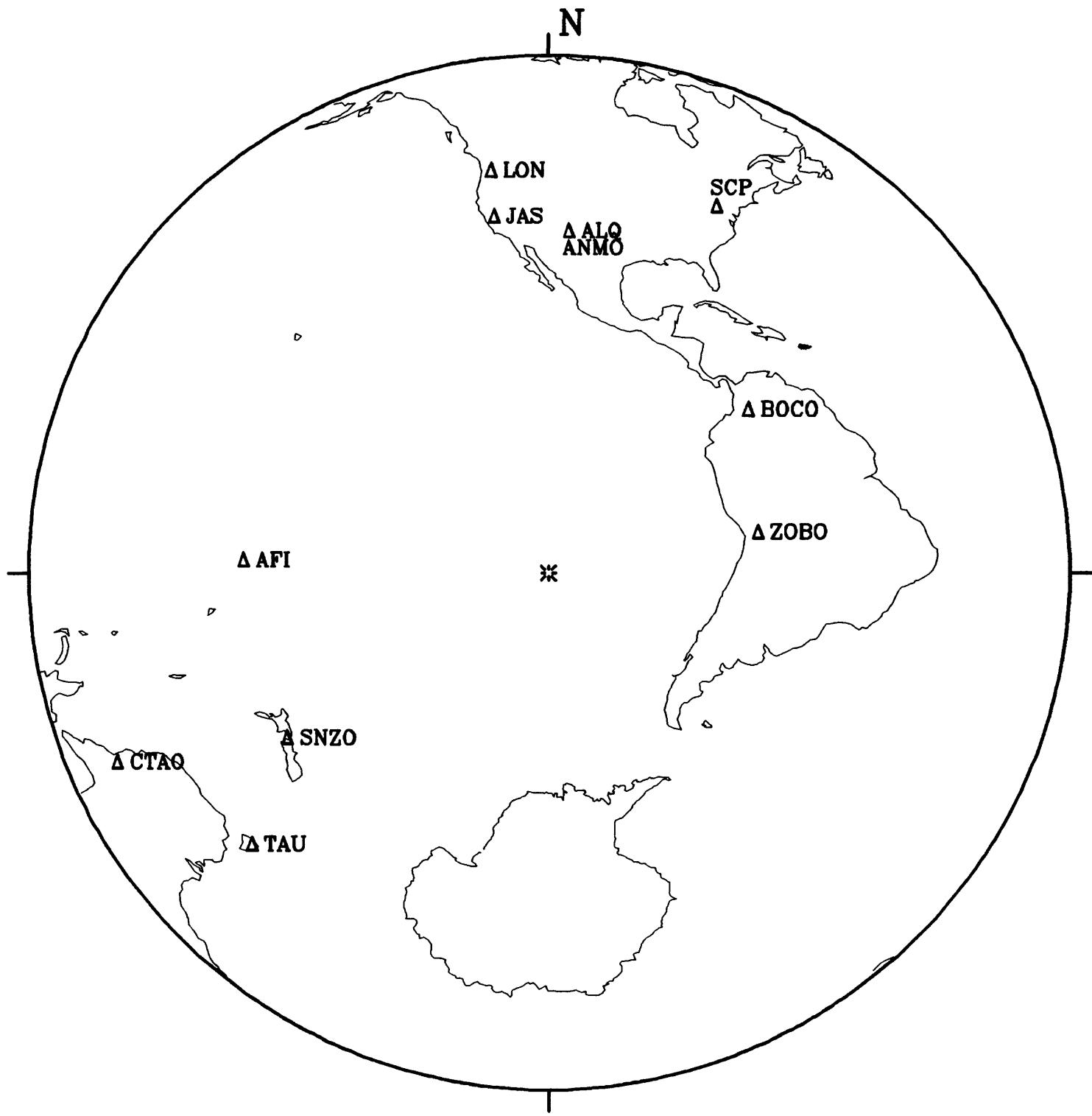
LPZ

Loyalty Islands Region h=33.0 MB=6.9 ms=7.0



28 October 1981 04:34:17.78

Easter Island Region

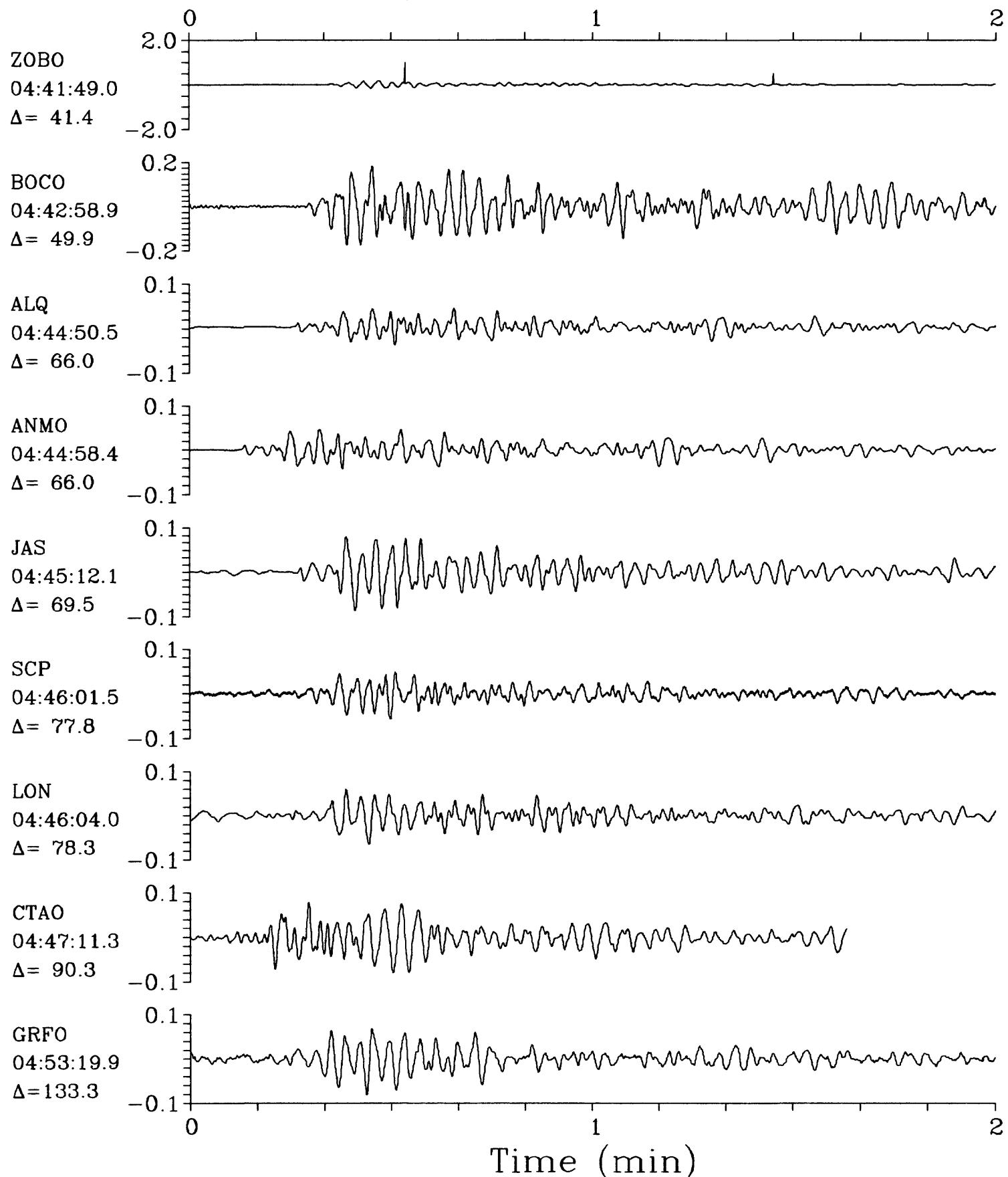


56 SPZ

28 October 1981 04:34:17.78

SPZ

Easter Island Region h=10.0 MB=6.2 ms=6.2



IPZ

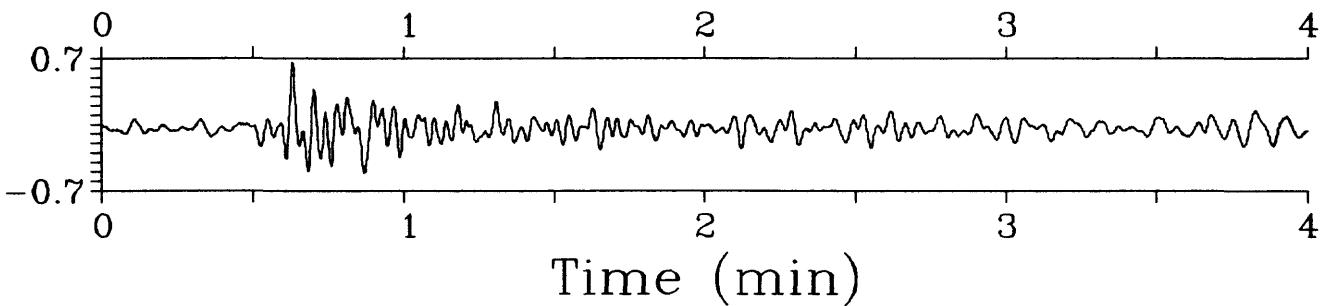
28 October 1981 04:34:17.78

IPZ⁵⁷

Easter Island Region h=10.0 MB=6.2 ms=6.2

JAS

04:44:58.6

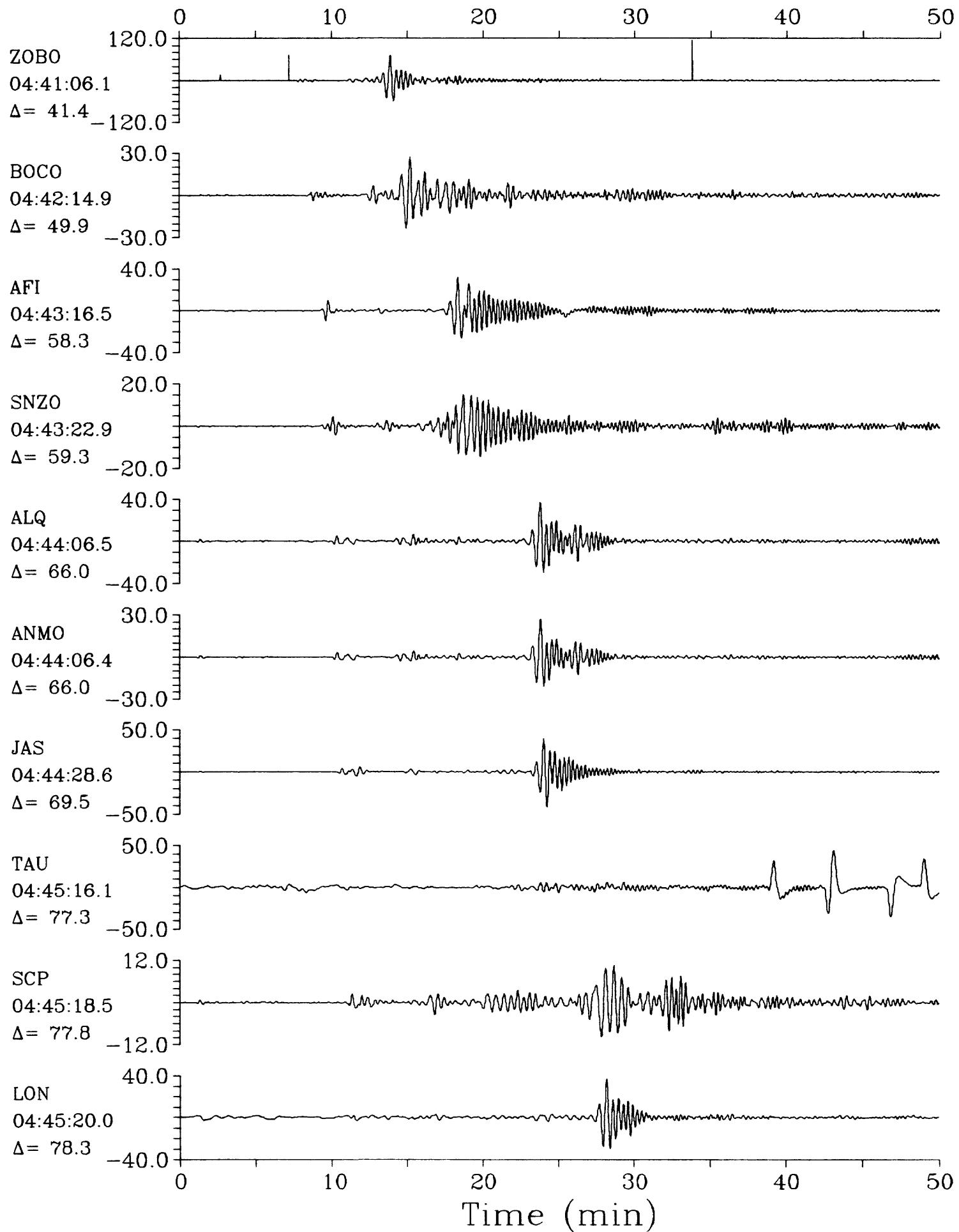
 $\Delta = 69.5$ 

58 LPZ

28 October 1981 04:34:17.78

LPZ

Easter Island Region h=10.0 MB=6.2 ms=6.2

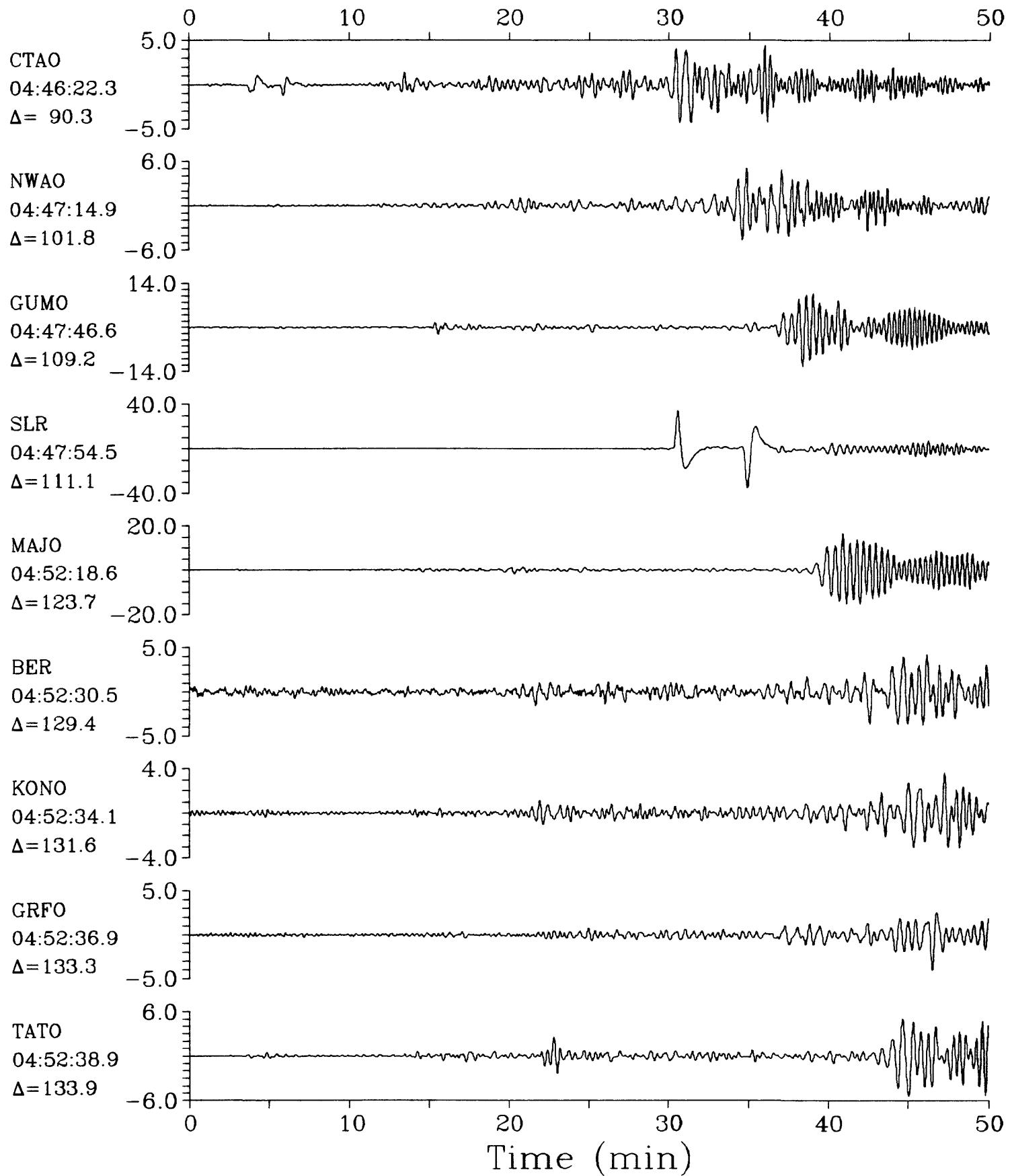


LPZ

28 October 1981 04:34:17.78

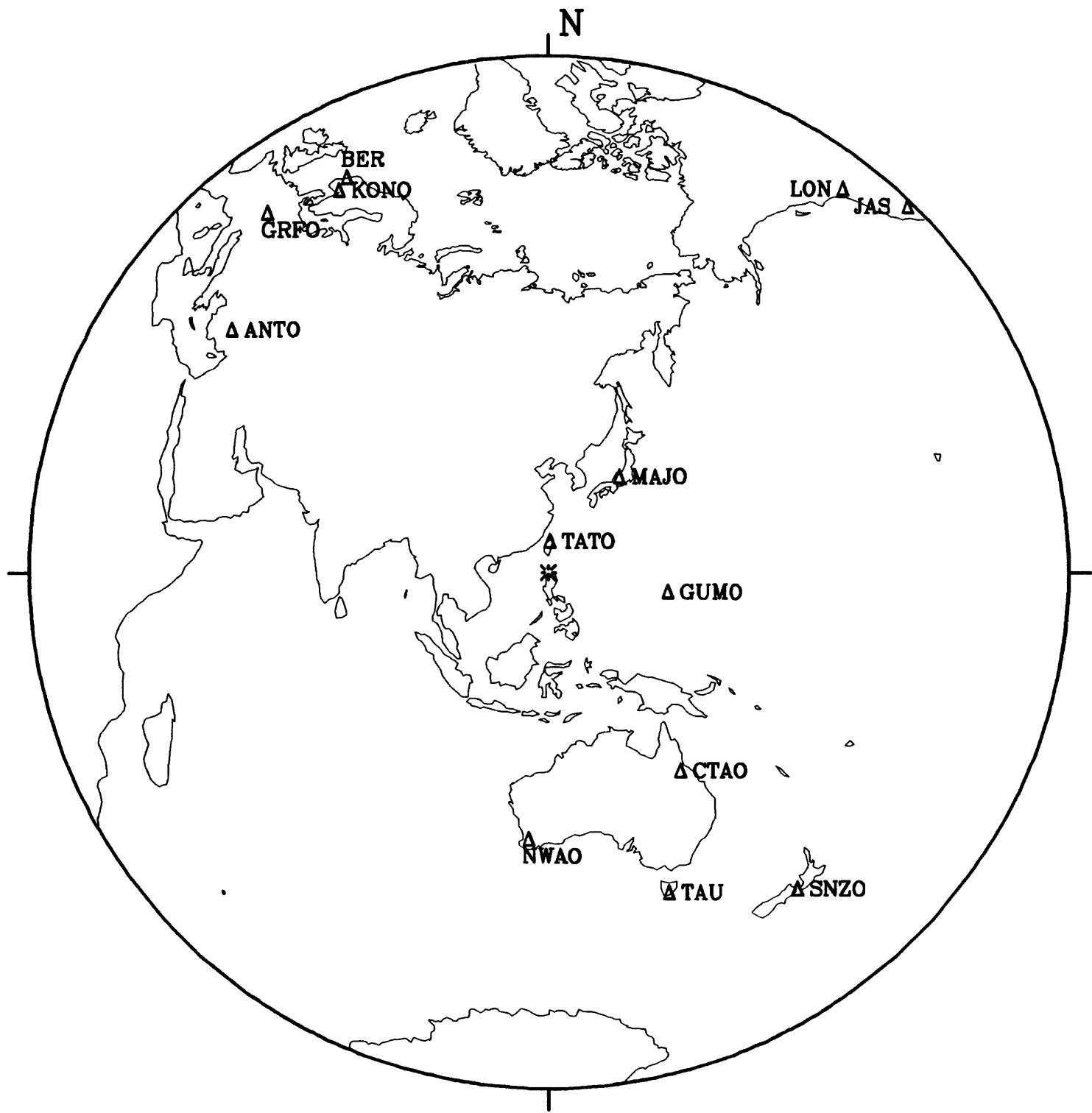
LPZ 59

Easter Island Region h=10.0 MB=6.2 ms=6.2



22 November 1981 15:05:20.56

Luzon, Philippine Islands

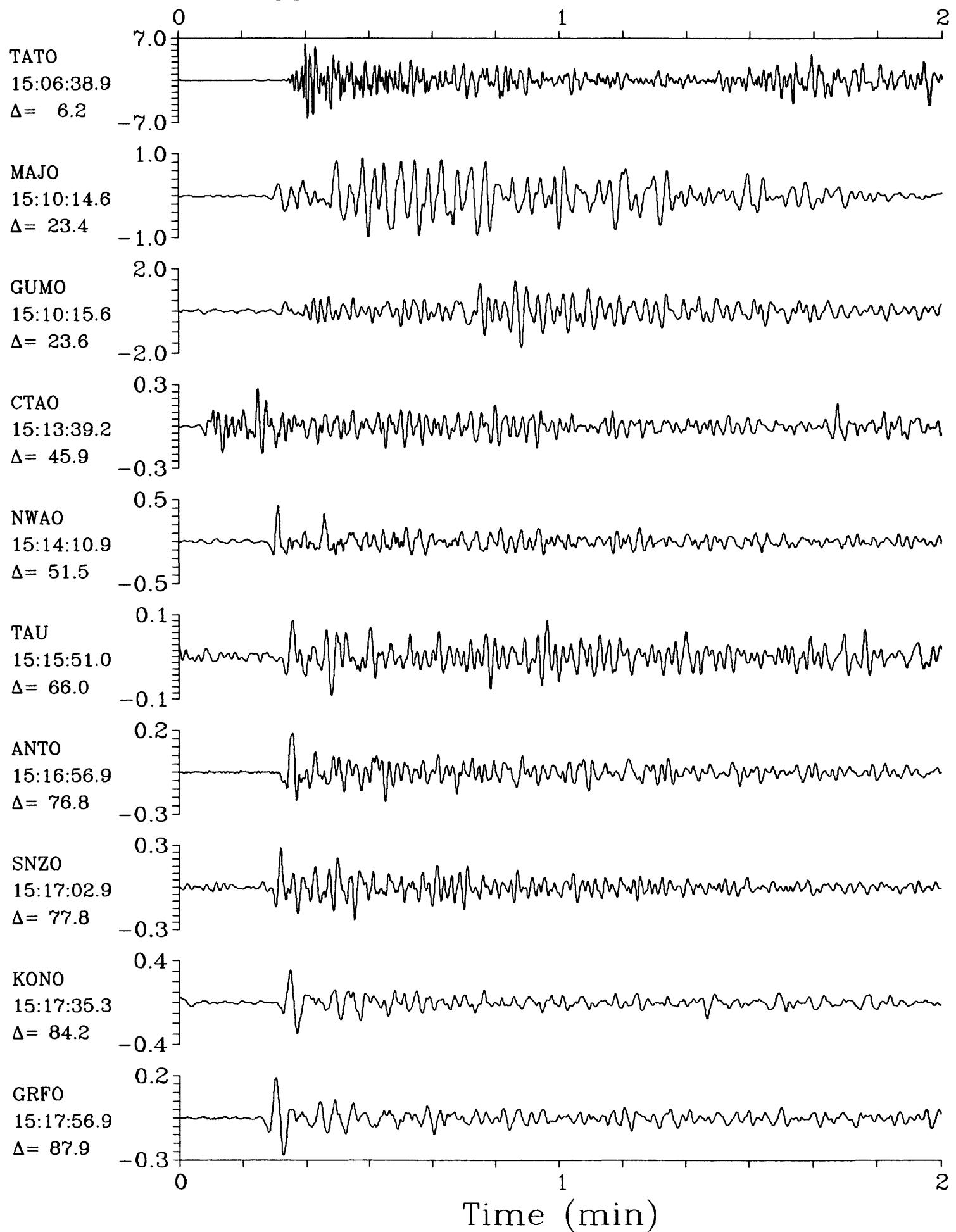


SPZ

22 November 1981 15:05:20.56

SPZ⁶¹

Luzon, Philippine Islands h=24.0 MB=6.2 ms=6.5

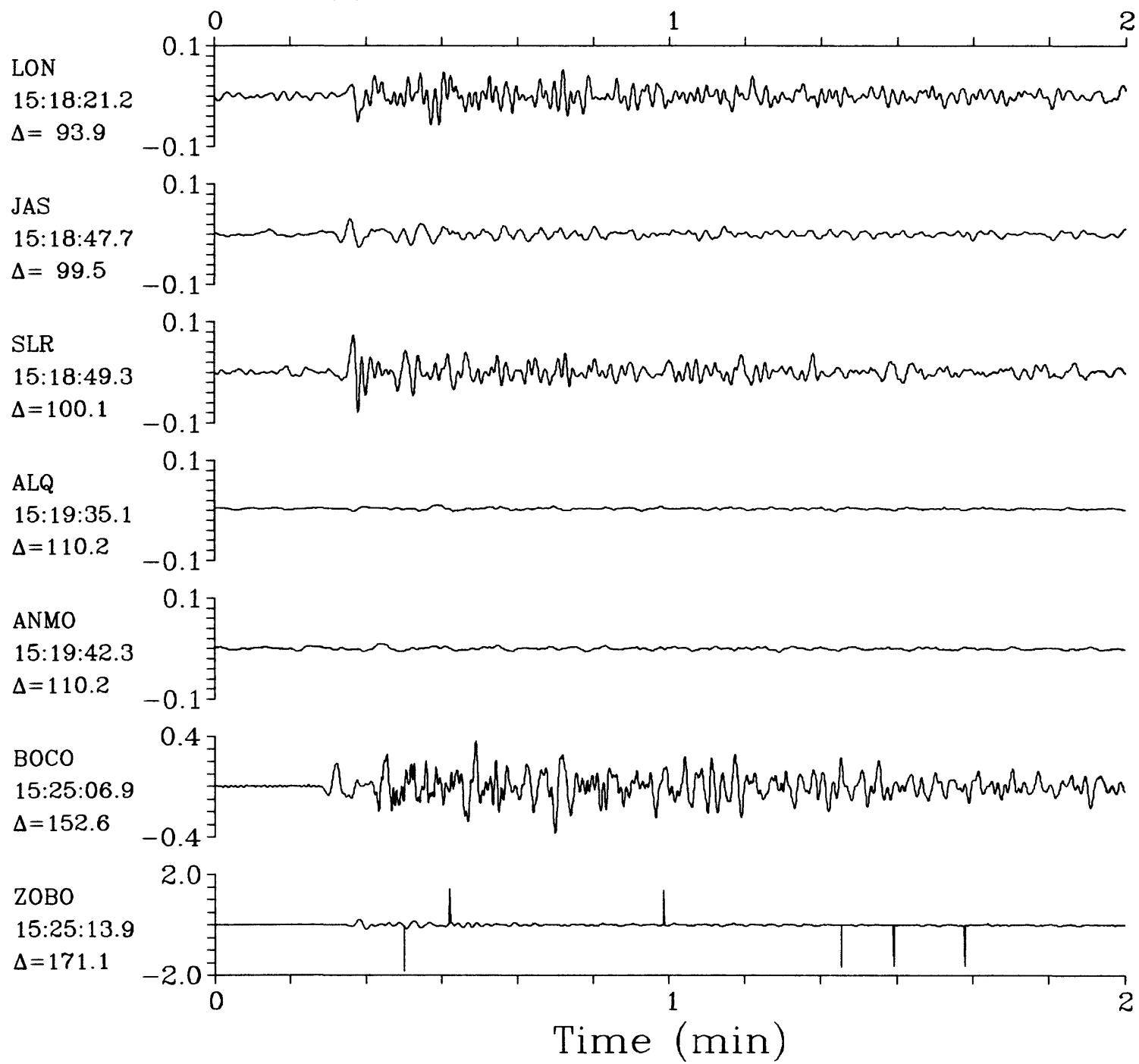


⁶²SPZ

22 November 1981 15:05:20.56

SPZ

Luzon, Philippine Islands h=24.0 MB=6.2 ms=6.5

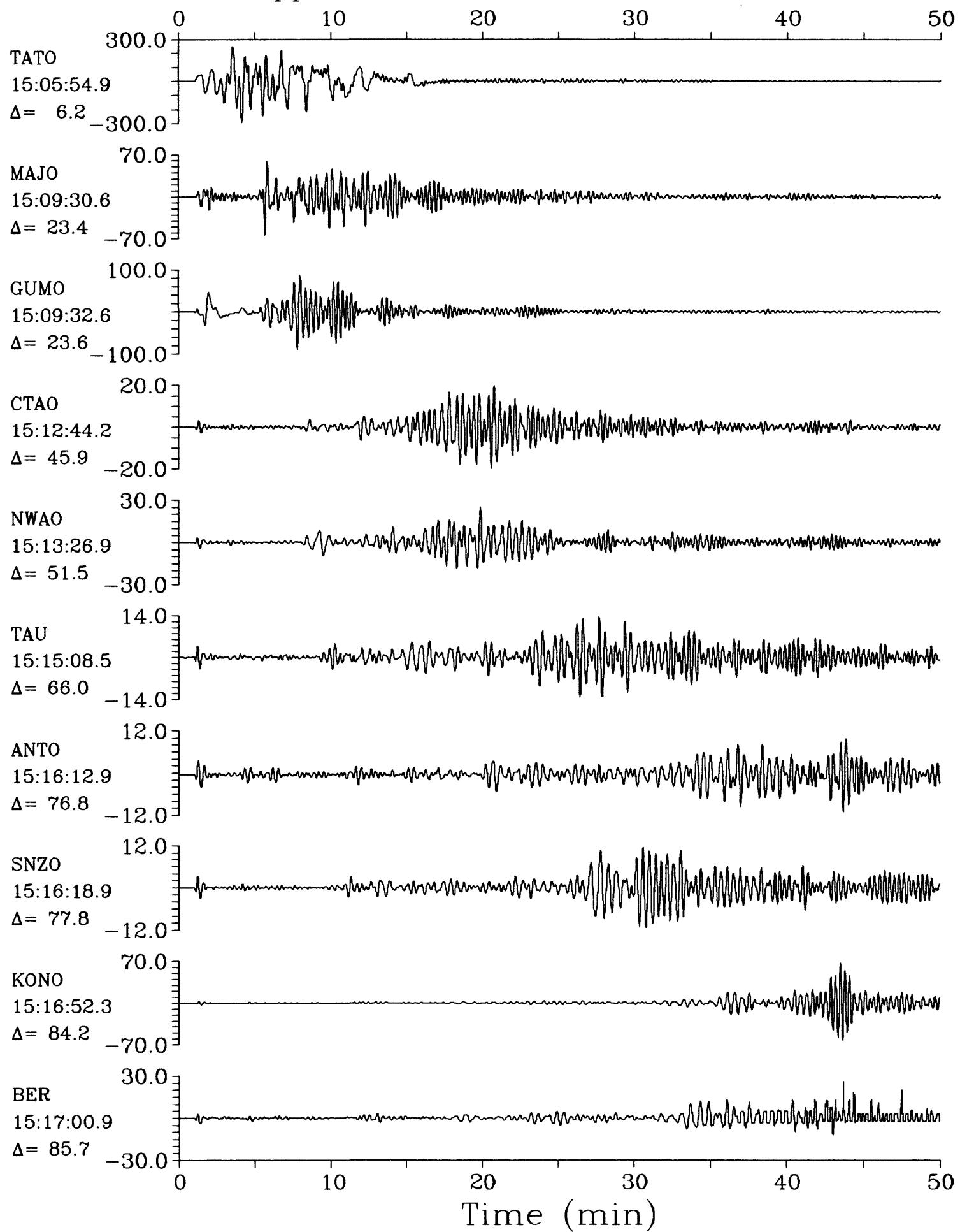


LPZ

22 November 1981 15:05:20.56

LPZ⁶³

Luzon, Philippine Islands h=24.0 MB=6.2 ms=6.5

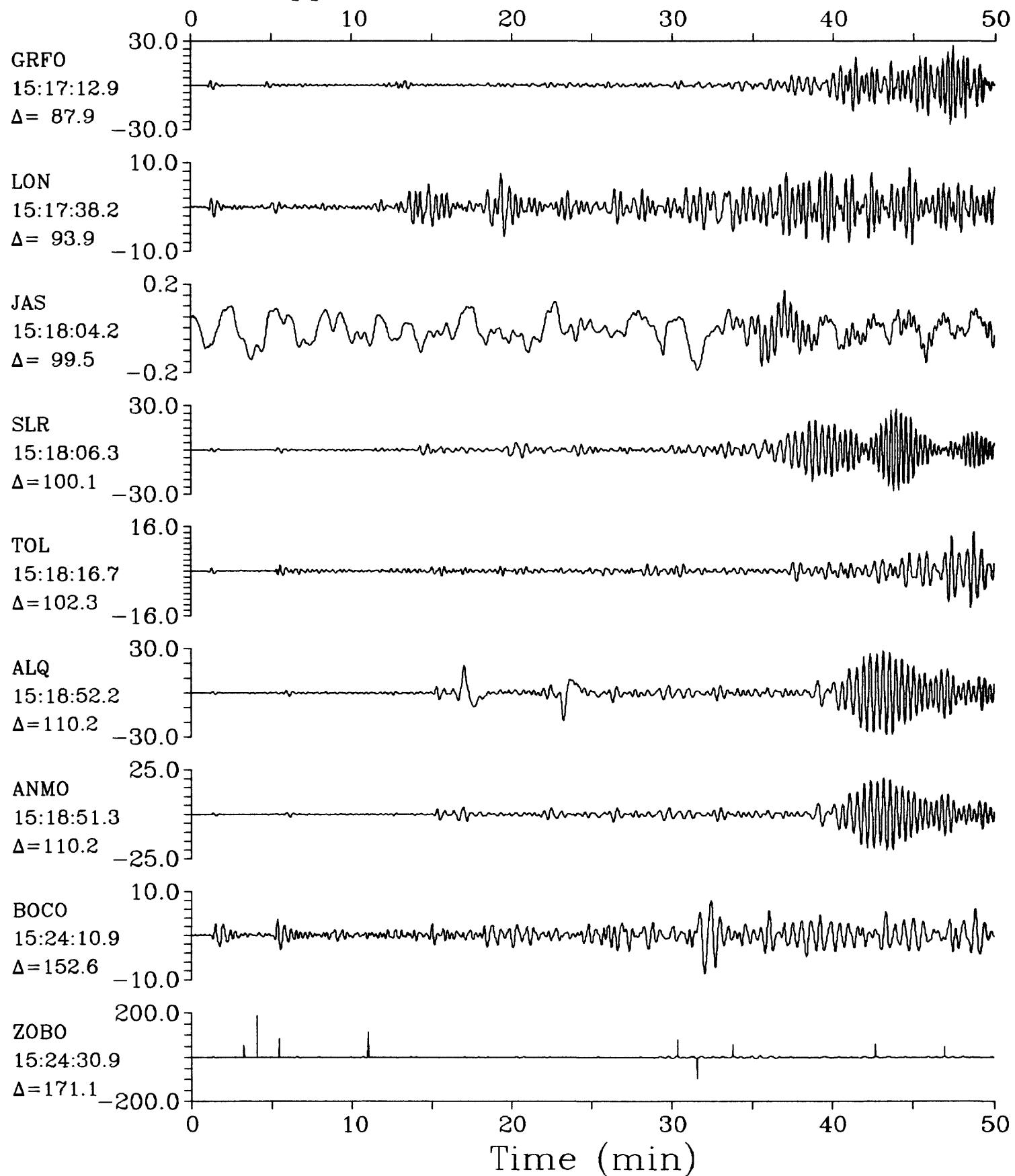


64 LPZ

22 November 1981 15:05:20.56

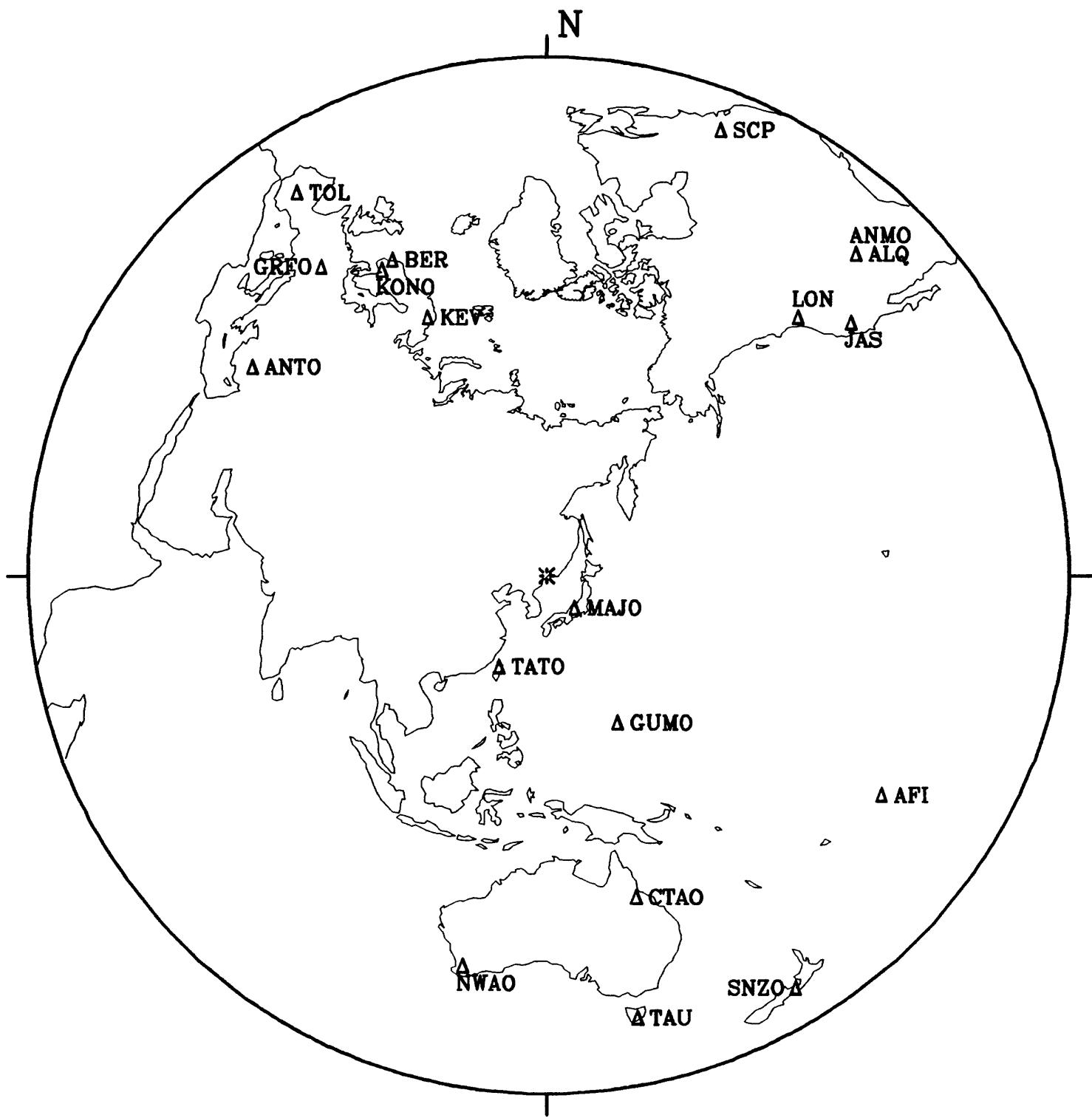
LPZ

Luzon, Philippine Islands h=24.0 MB=6.2 ms=6.5



27 November 1981 17:21:45.80

E. USSR–N.E. China Border Reg.

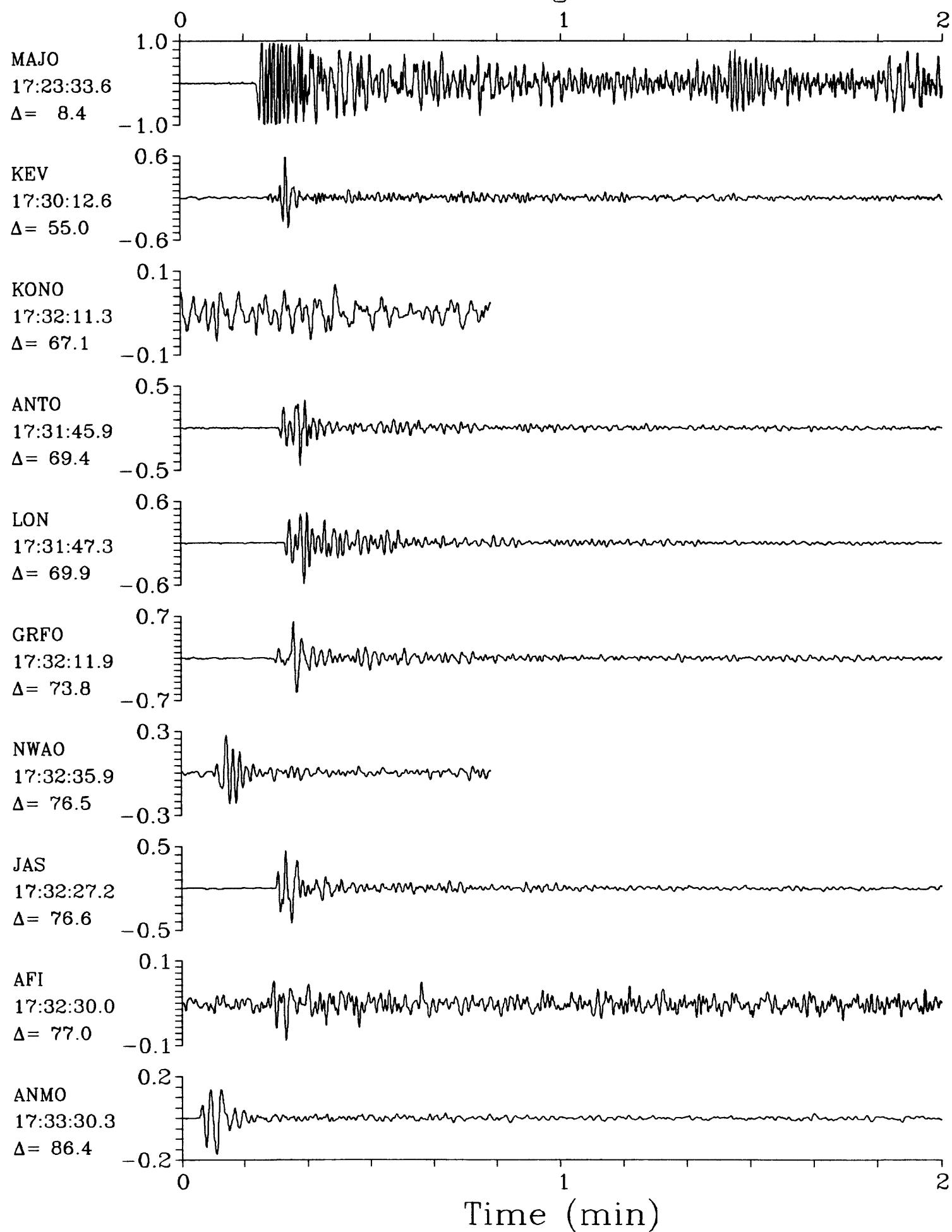


⁶⁶SPZ

27 November 1981 17:21:45.80

SPZ

E. USSR–N.E. China Border Reg. h=543.0 MB=5.8

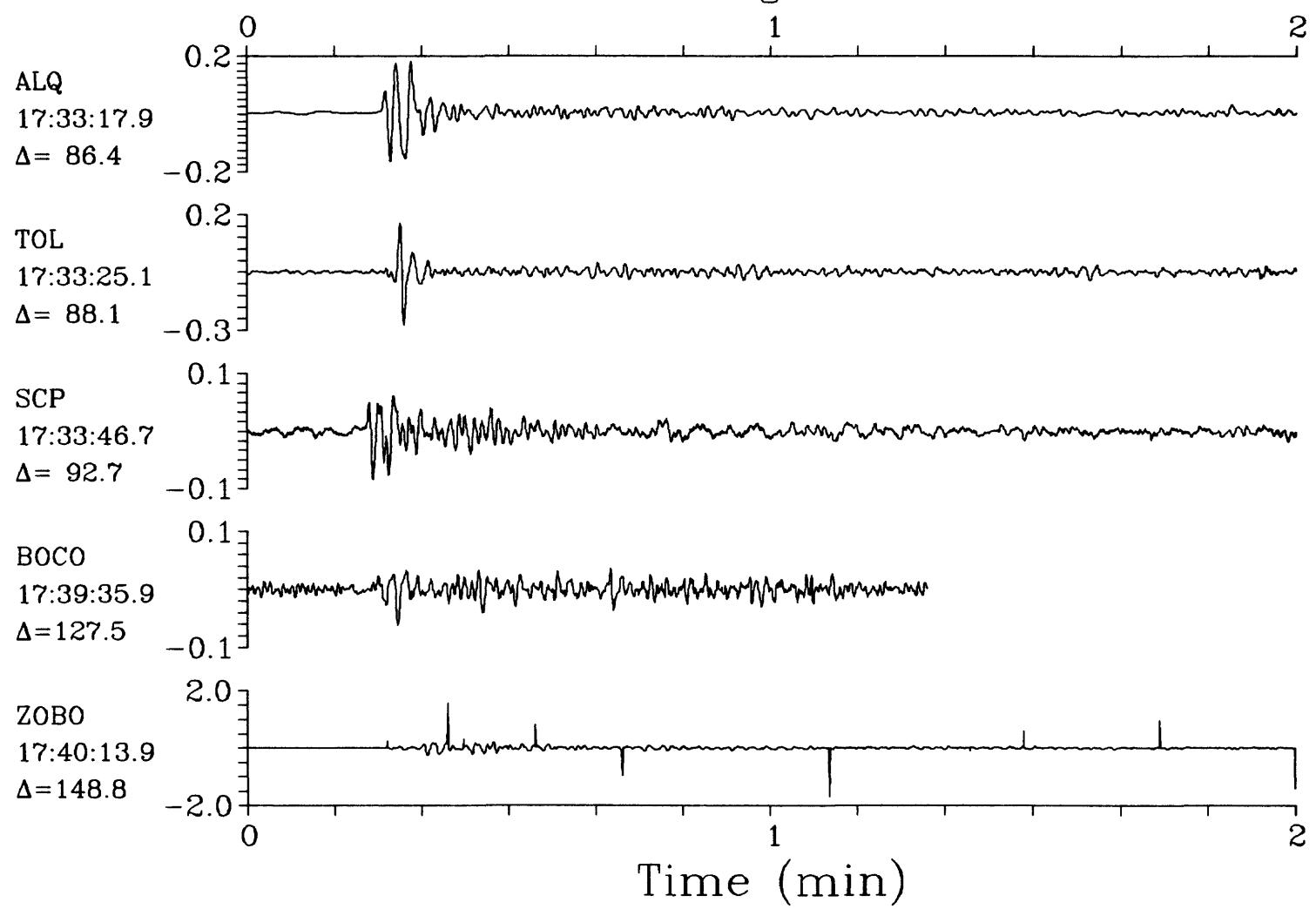


SPZ

27 November 1981 17:21:45.80

SPZ⁶⁷

E. USSR-N.E. China Border Reg. h=543.0 MB=5.8

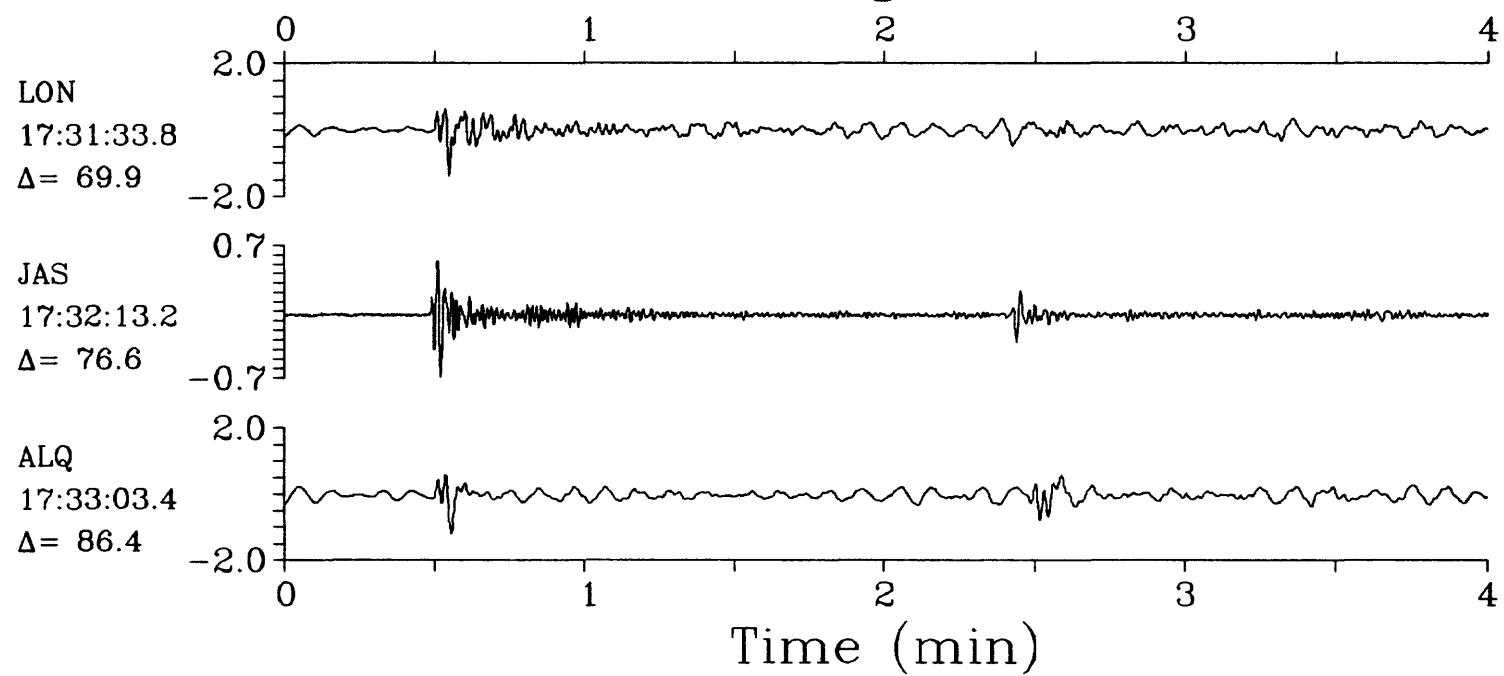


⁶⁸ IPZ

27 November 1981 17:21:45.80

IPZ

E. USSR-N.E. China Border Reg. h=543.0 MB=5.8

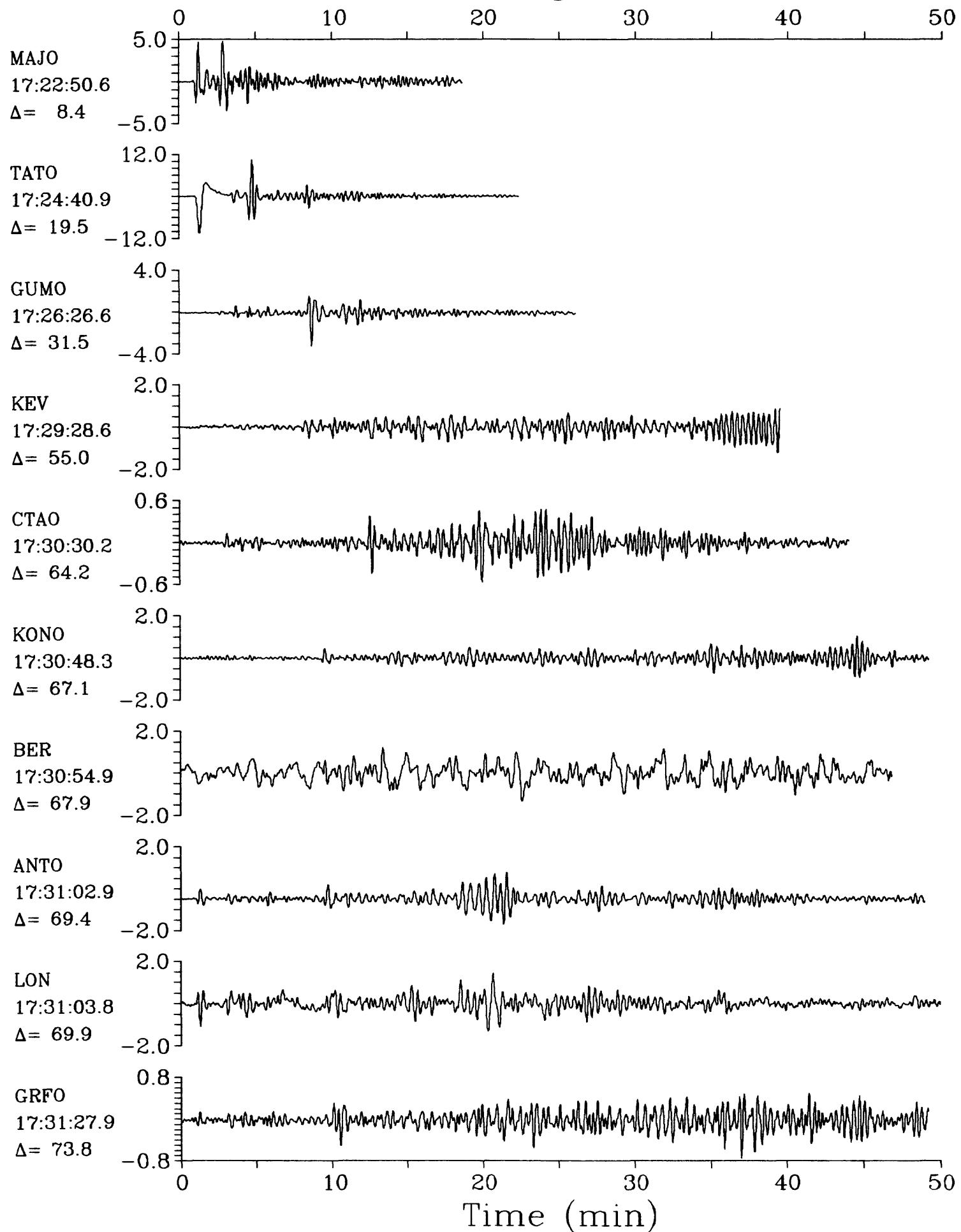


LPZ

27 November 1981 17:21:45.80

LPZ⁶⁹

E. USSR-N.E. China Border Reg. h=543.0 MB=5.8

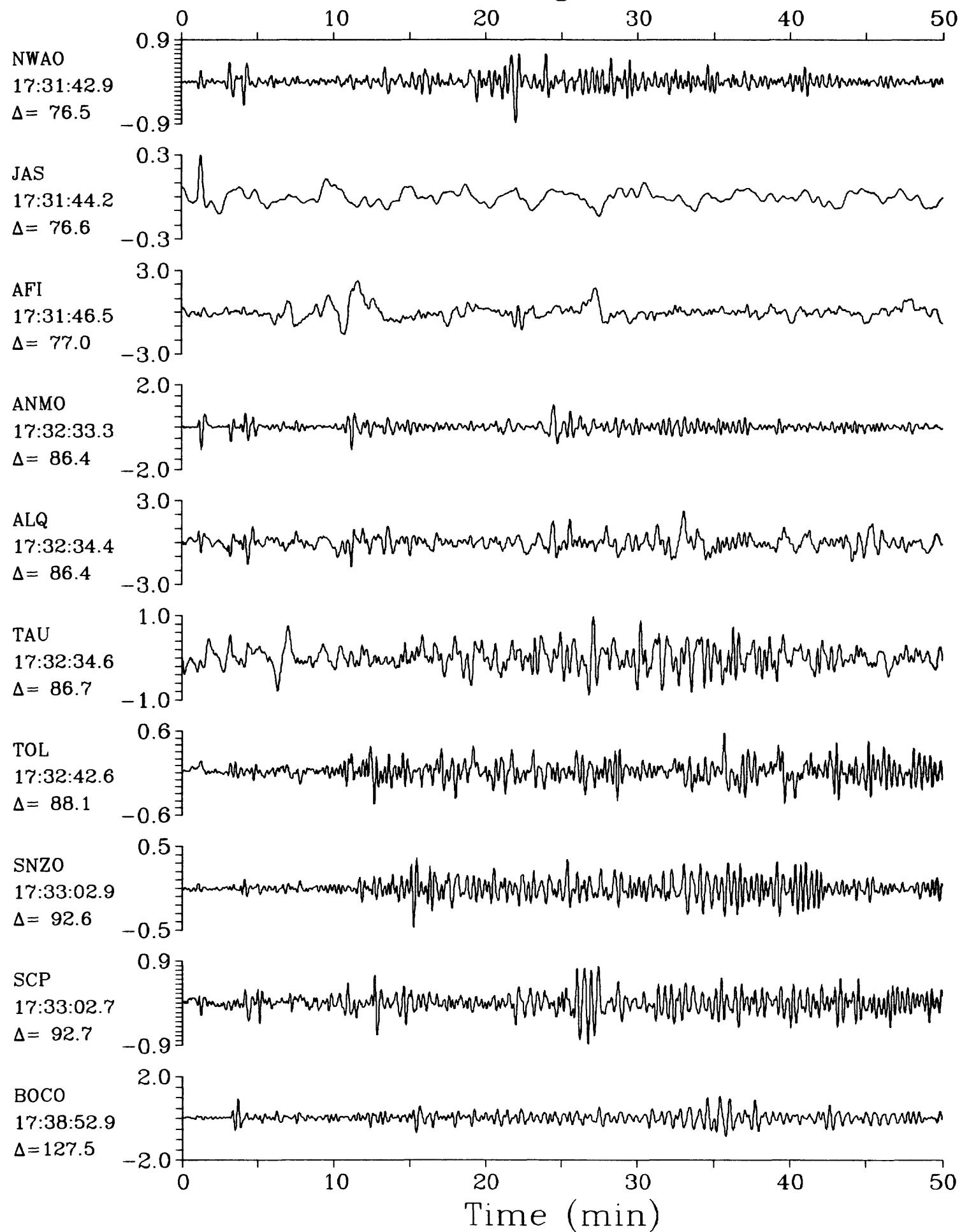


70 LPZ

27 November 1981 17:21:45.80

LPZ

E. USSR-N.E. China Border Reg. h=543.0 MB=5.8

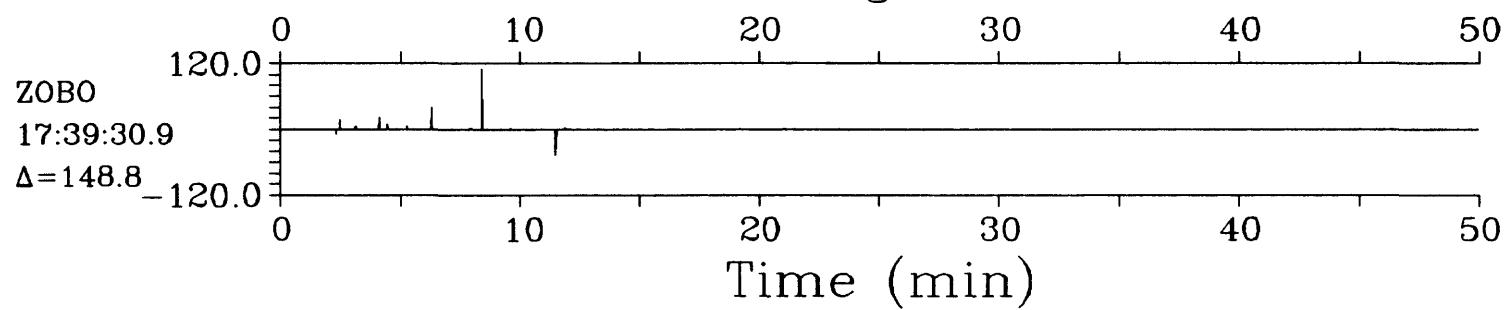


LPZ

27 November 1981 17:21:45.80

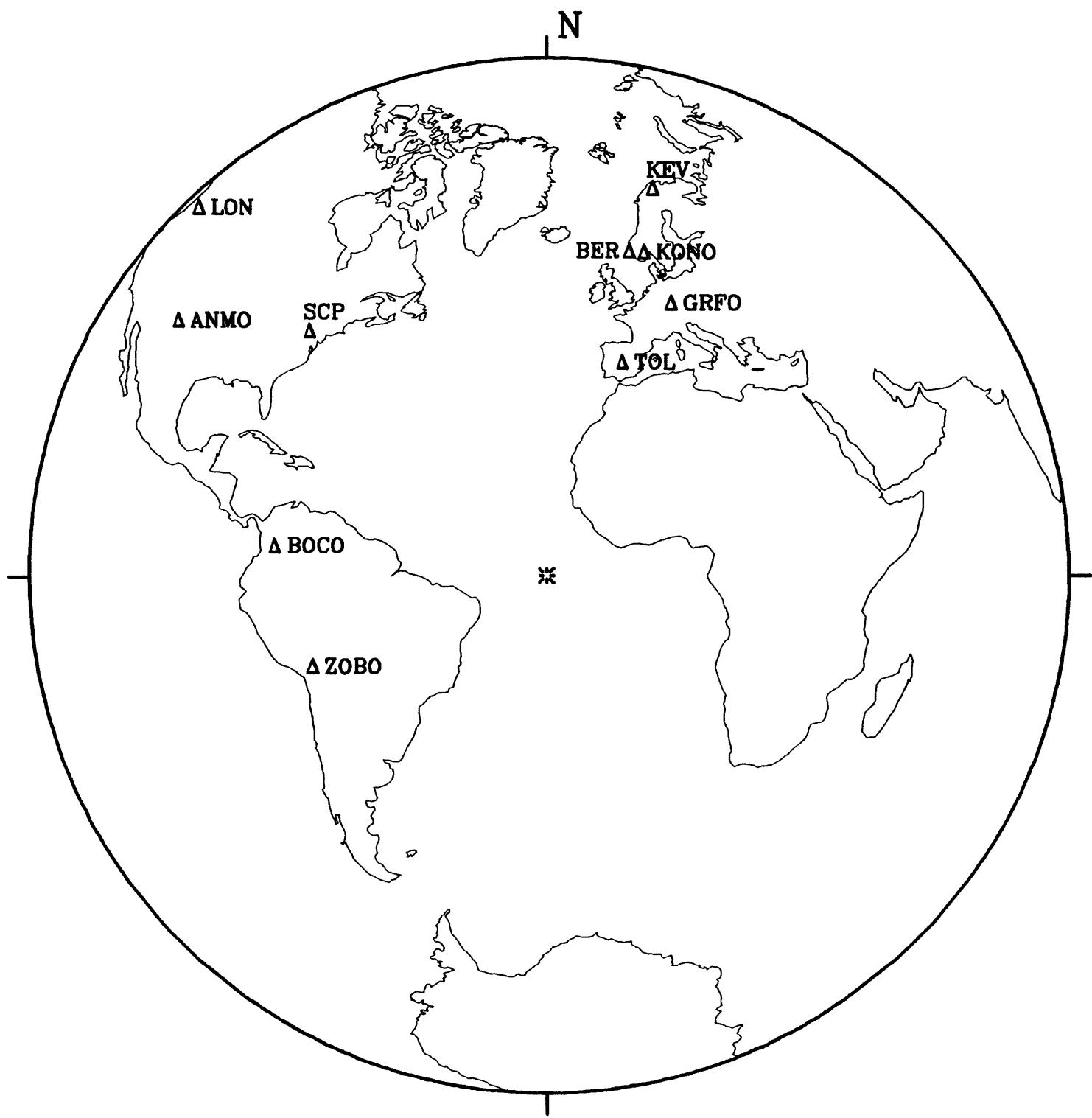
LPZ ⁷¹

E. USSR-N.E. China Border Reg. h=543.0 MB=5.8



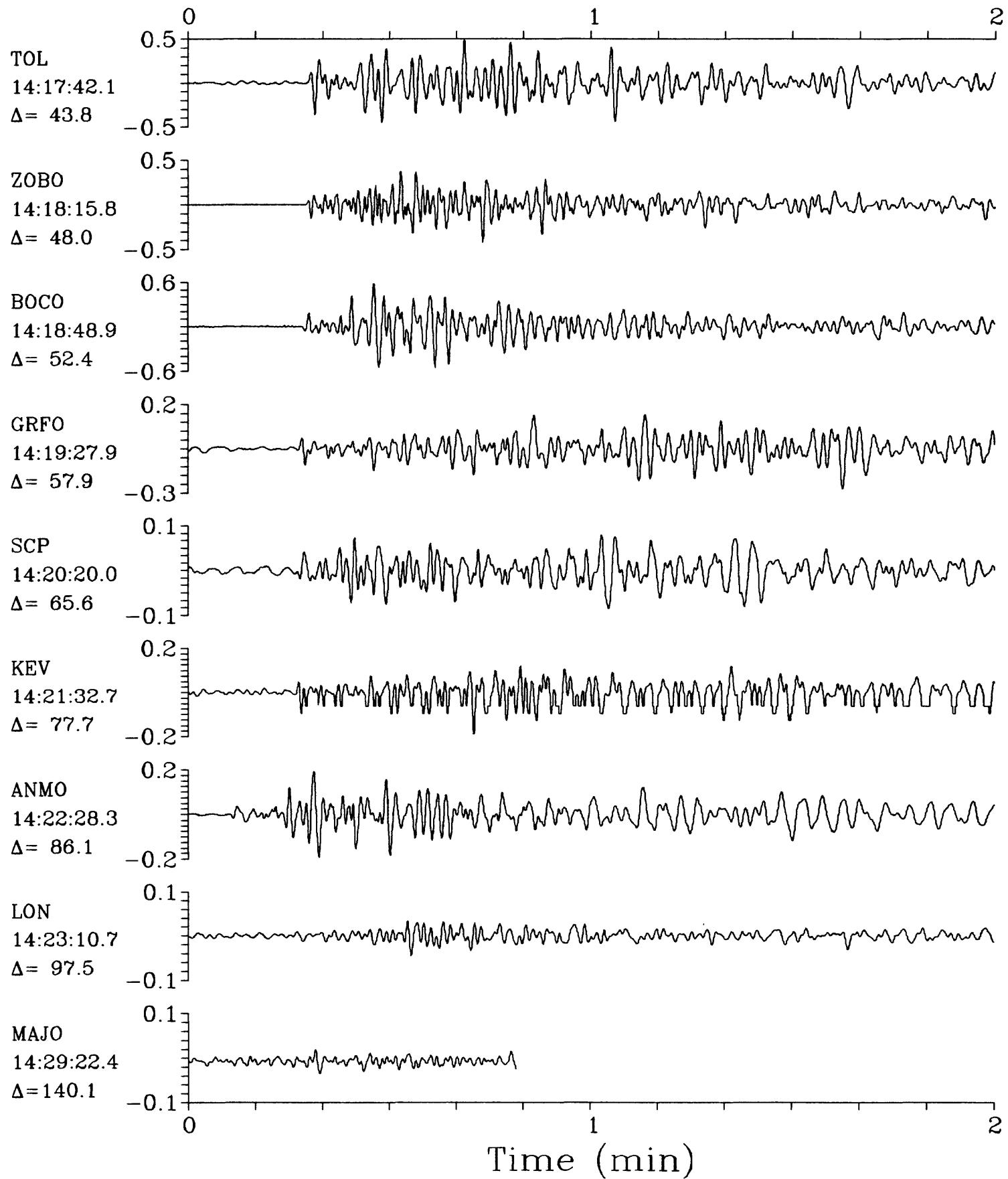
03 January 1982 14:09:50.45

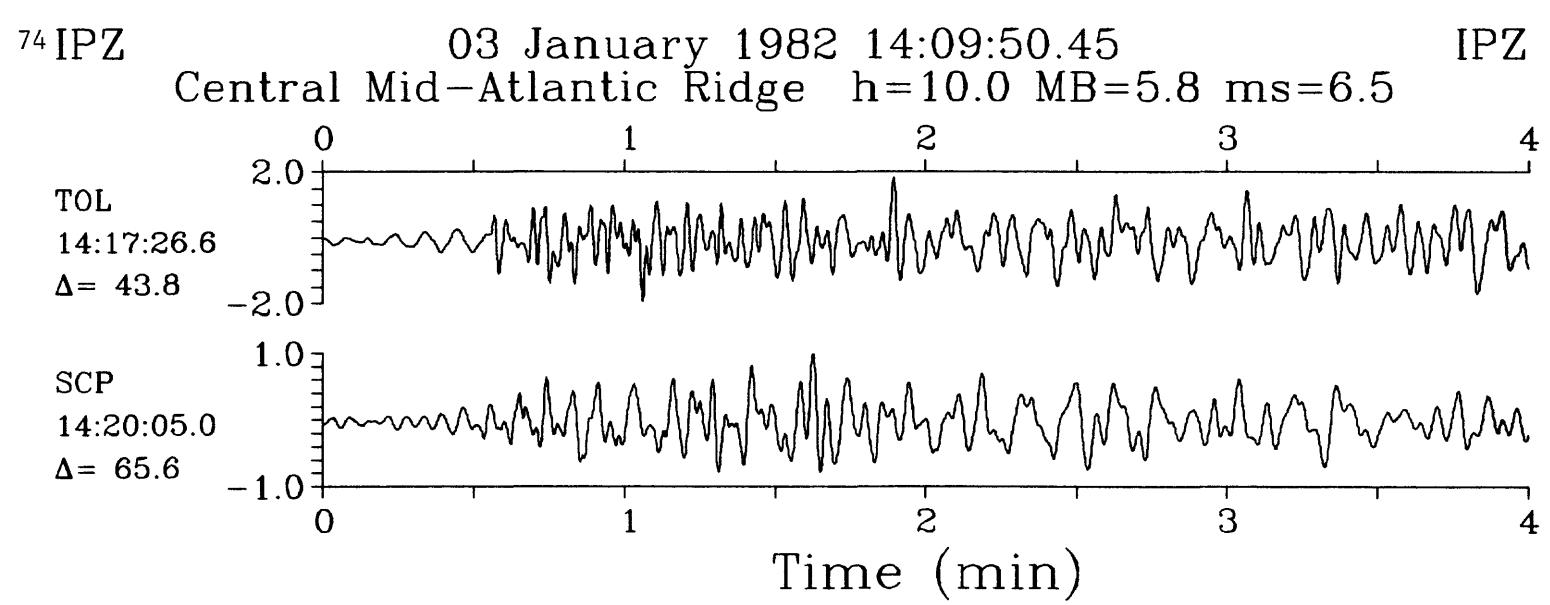
Central Mid-Atlantic Ridge



SPZ 03 January 1982 14:09:50.45
Central Mid-Atlantic Ridge h=10.0 MB=5.8 ms=6.5

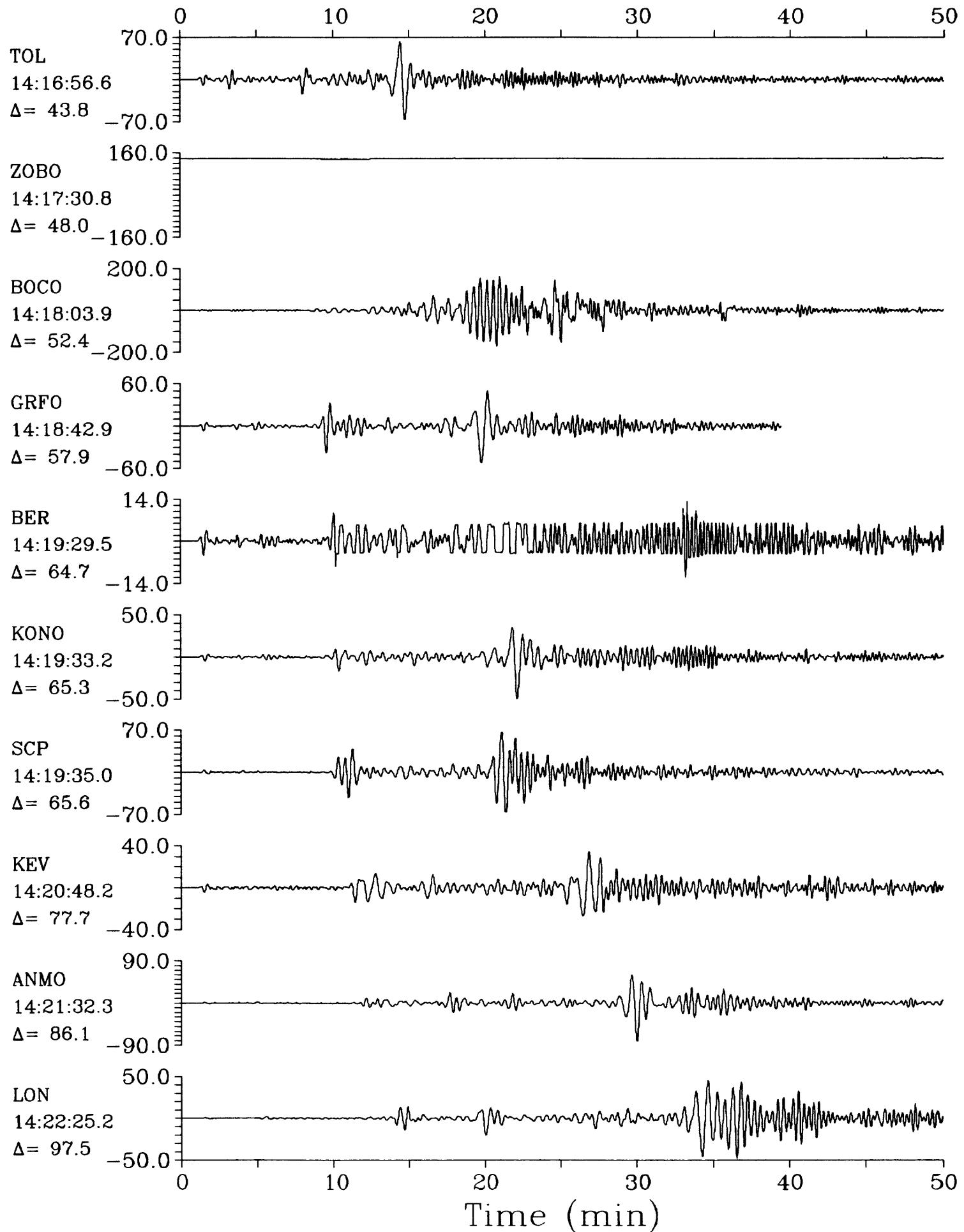
SPZ⁷³





LPZ 03 January 1982 14:09:50.45
Central Mid-Atlantic Ridge h=10.0 MB=5.8 ms=6.5

LPZ 75

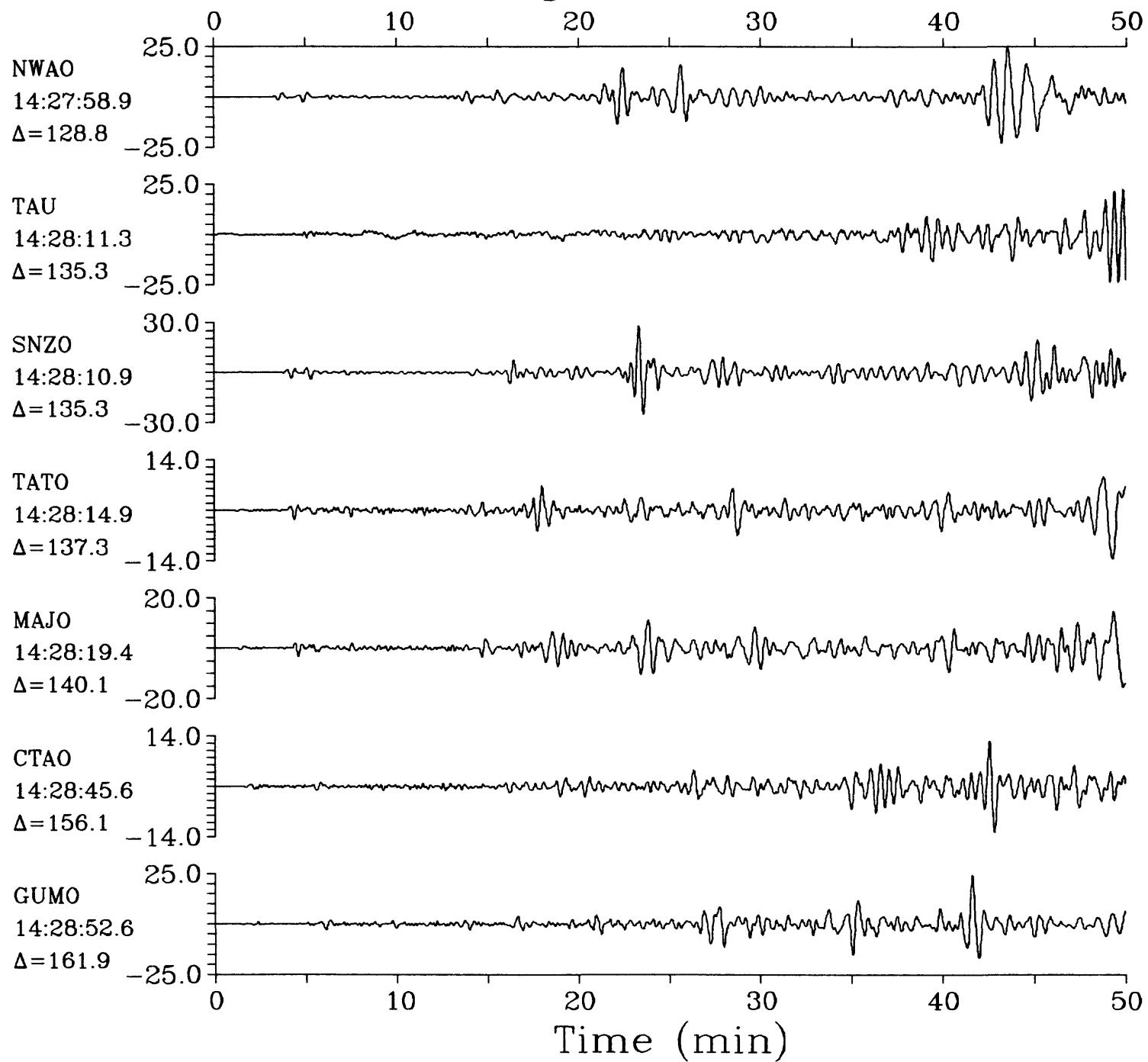


76 LPZ

03 January 1982 14:09:50.45

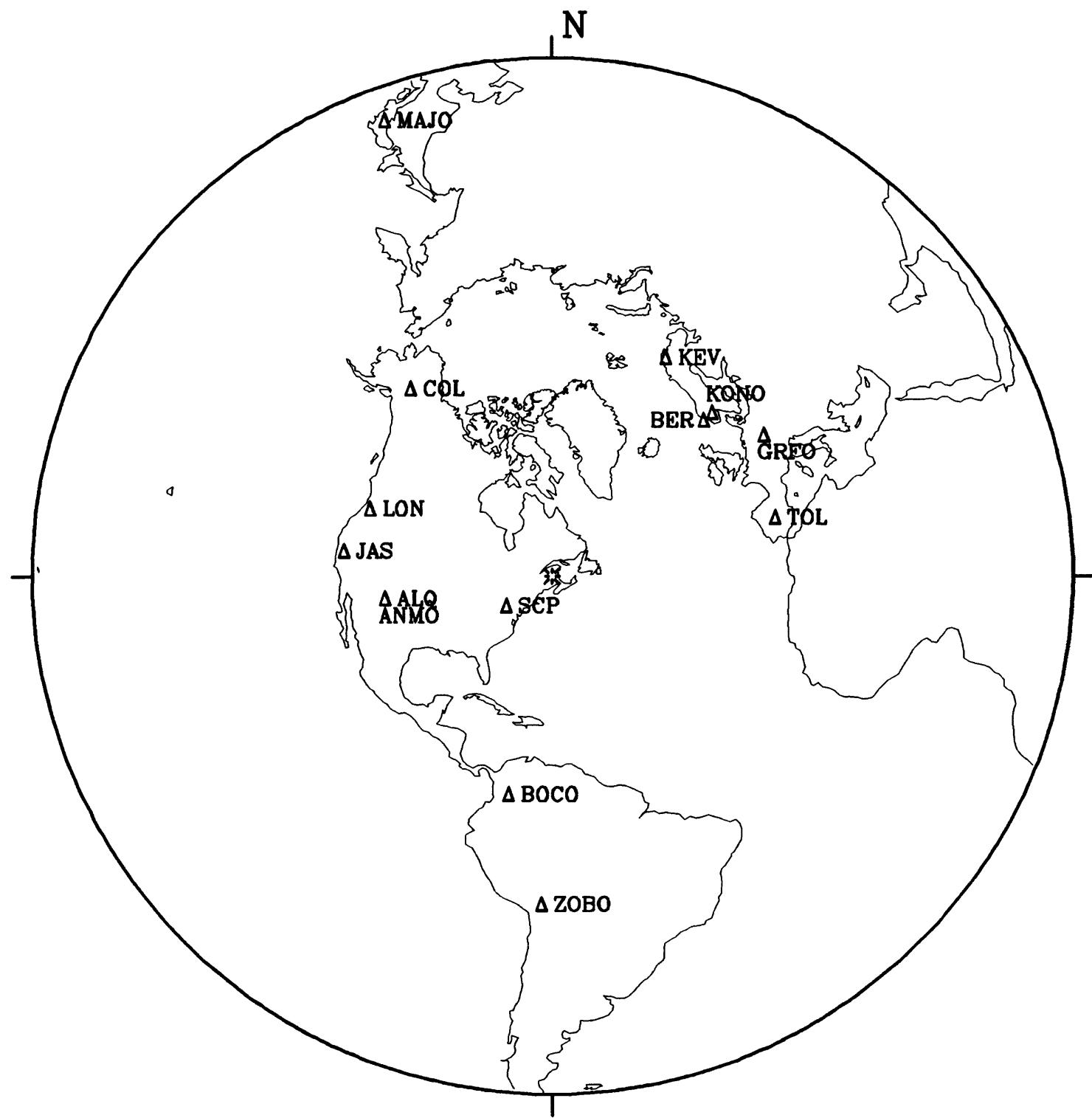
LPZ

Central Mid-Atlantic Ridge h=10.0 MB=5.8 ms=6.5



09 January 1982 12:53:51.88

New Brunswick

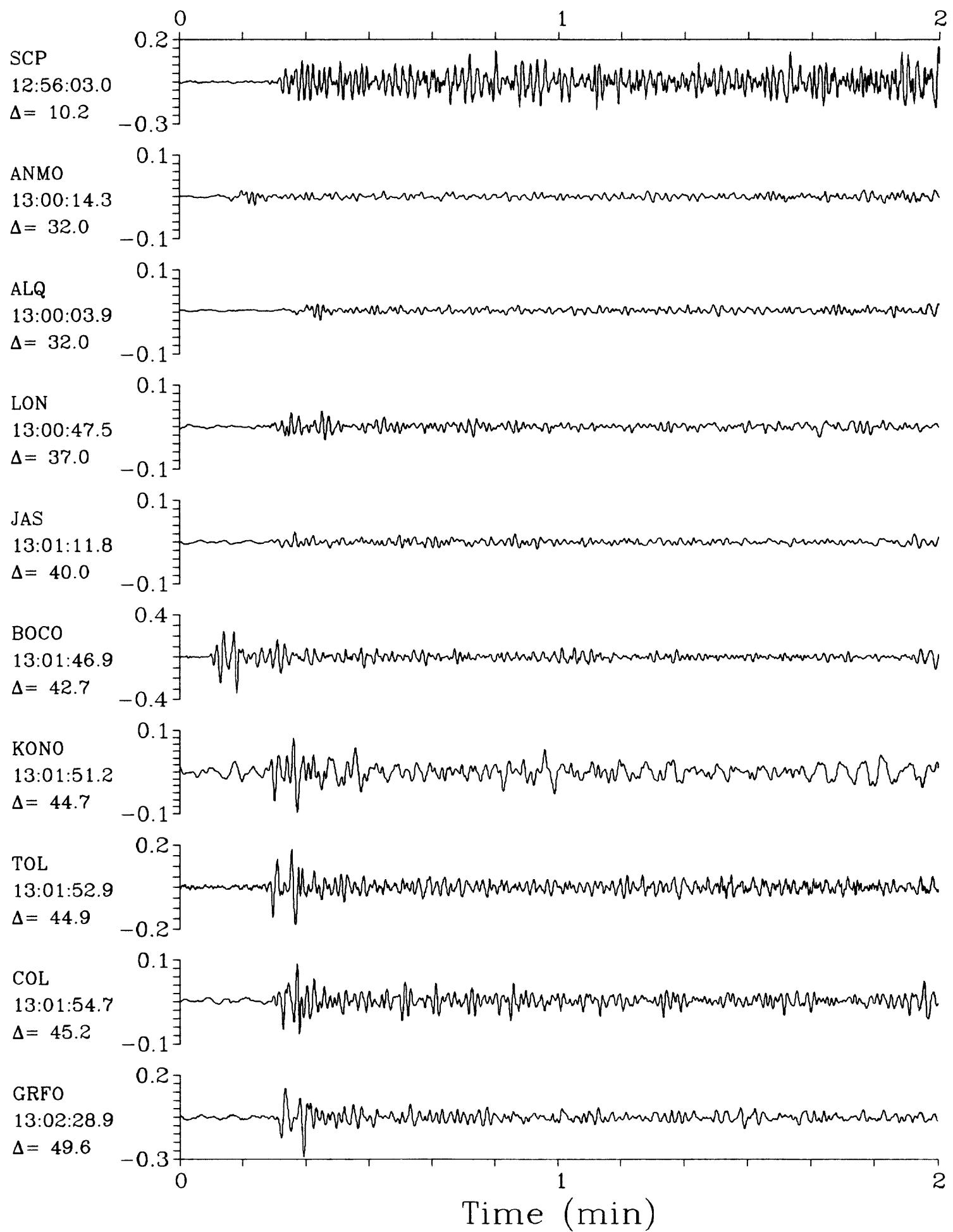


78 SPZ

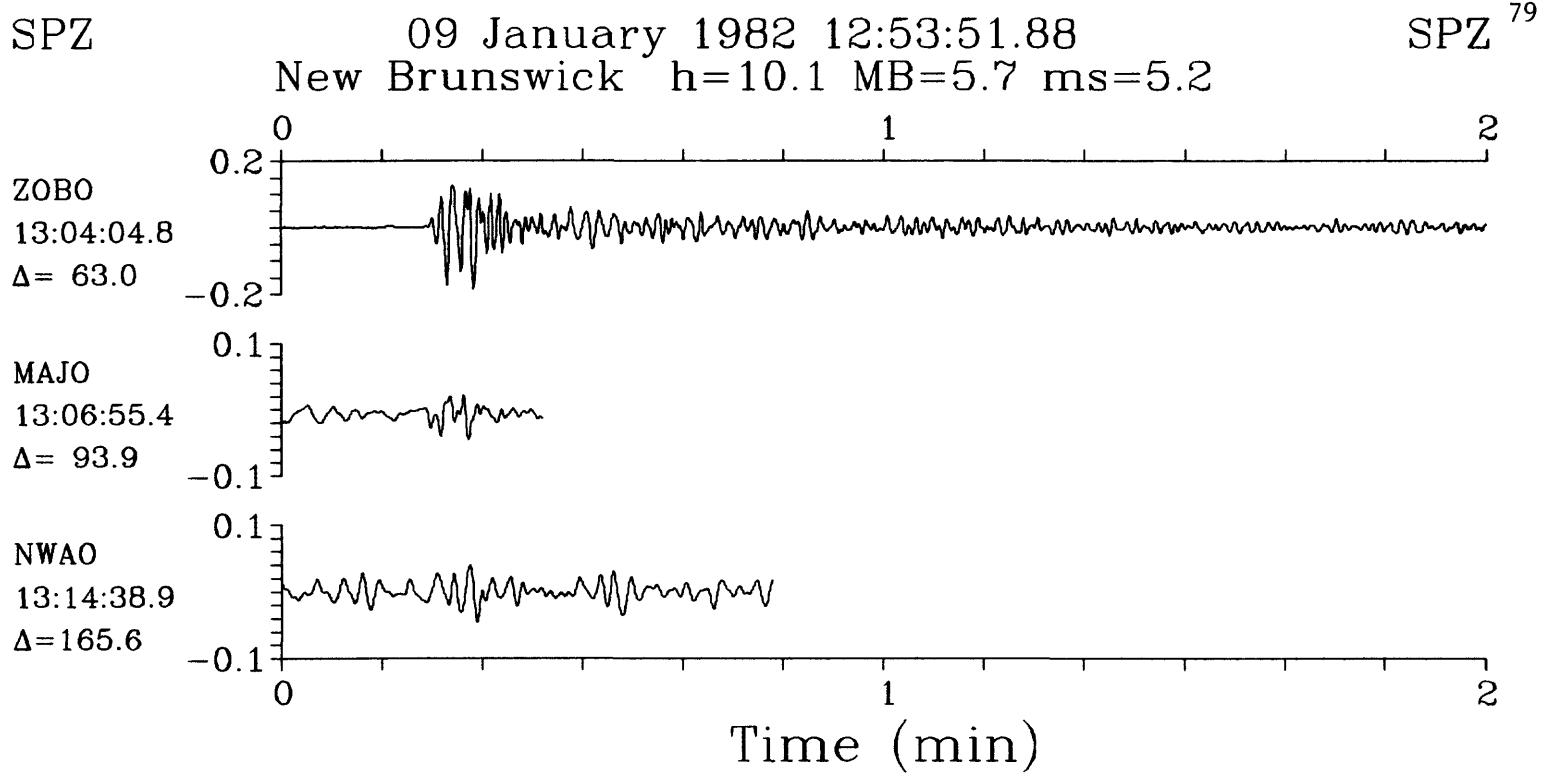
09 January 1982 12:53:51.88

SPZ

New Brunswick h=10.1 MB=5.7 ms=5.2



SPZ

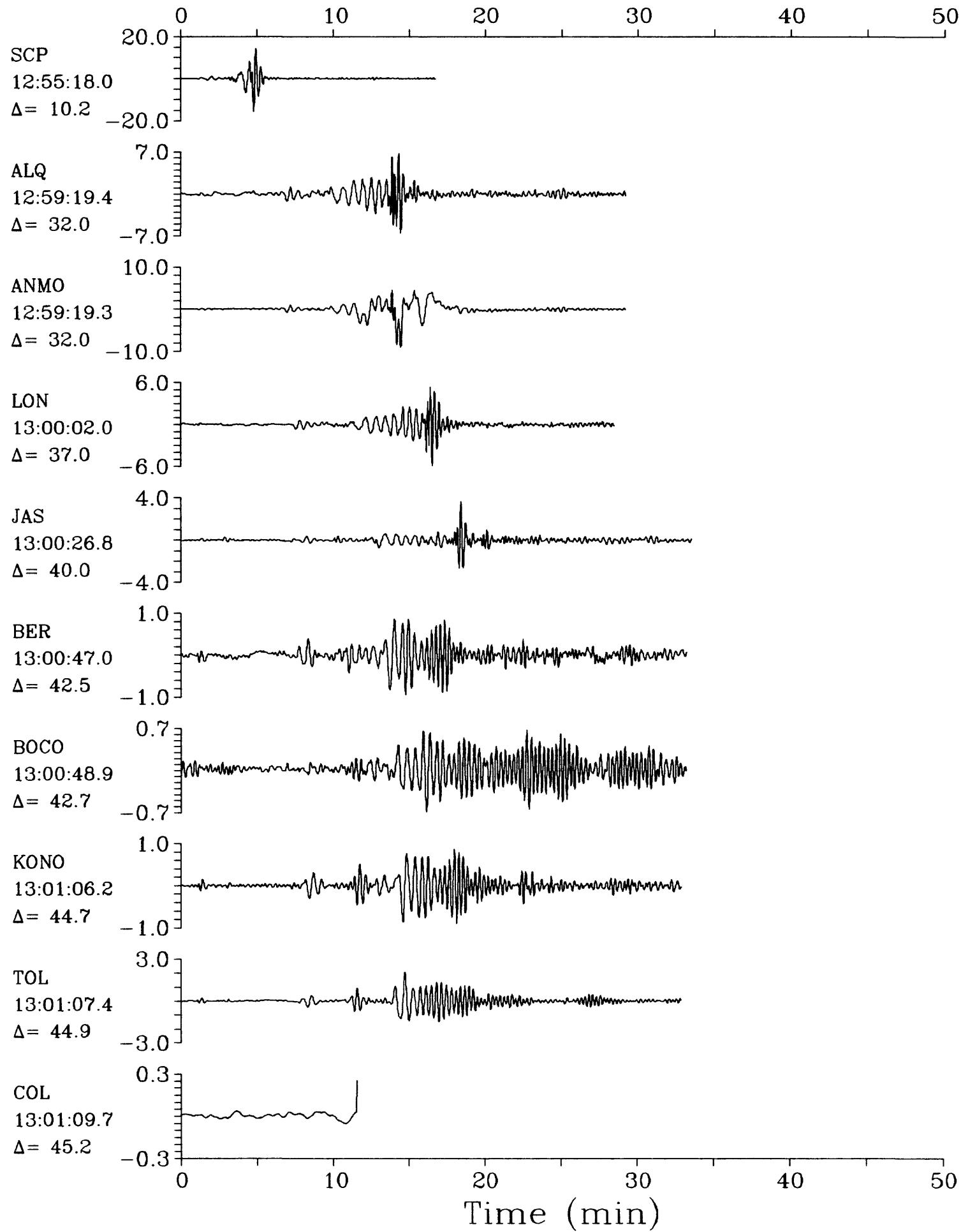


80 LPZ

09 January 1982 12:53:51.88

LPZ

New Brunswick h=10.1 MB=5.7 ms=5.2

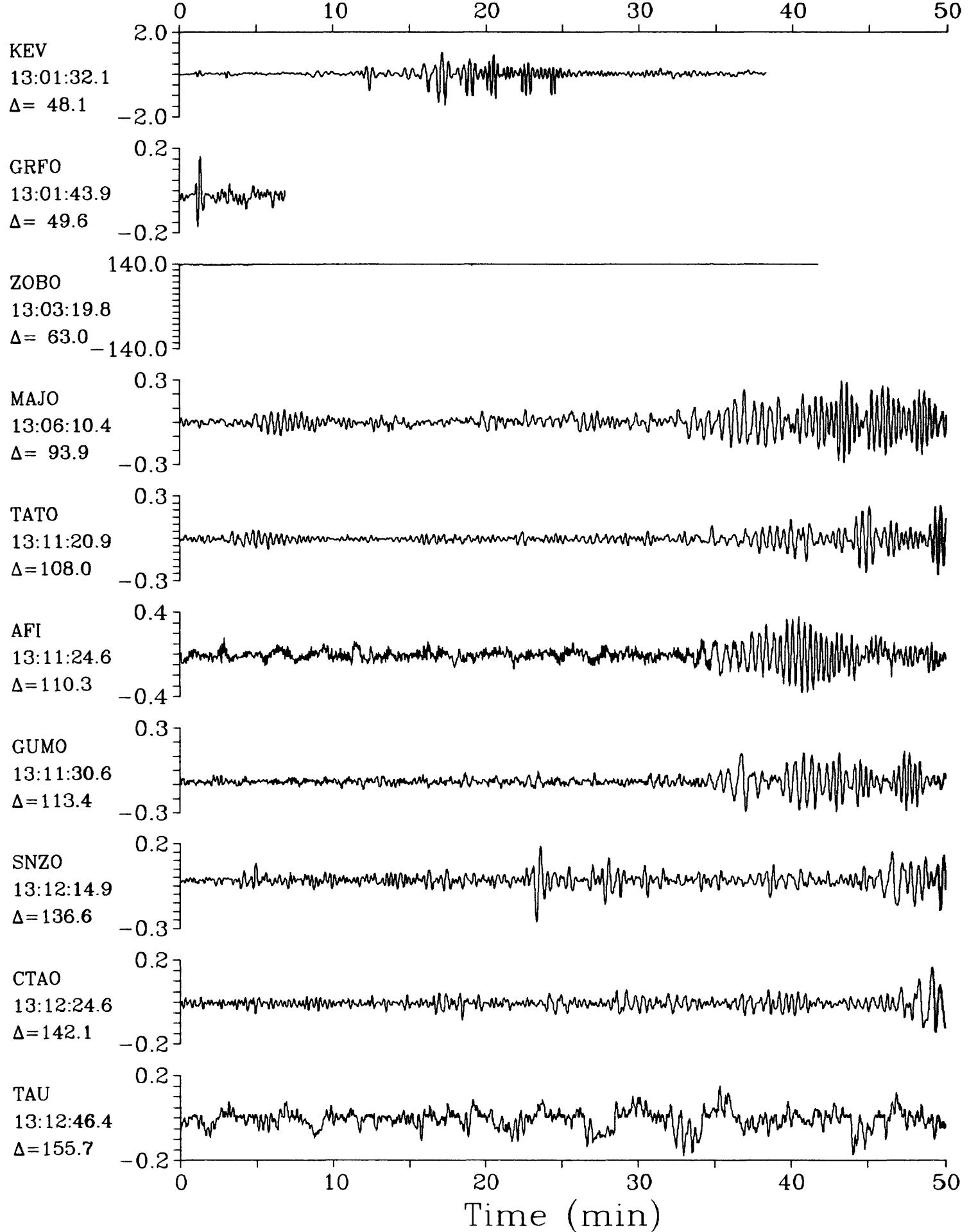


LPZ

09 January 1982 12:53:51.88

LPZ⁸¹

New Brunswick h=10.1 MB=5.7 ms=5.2



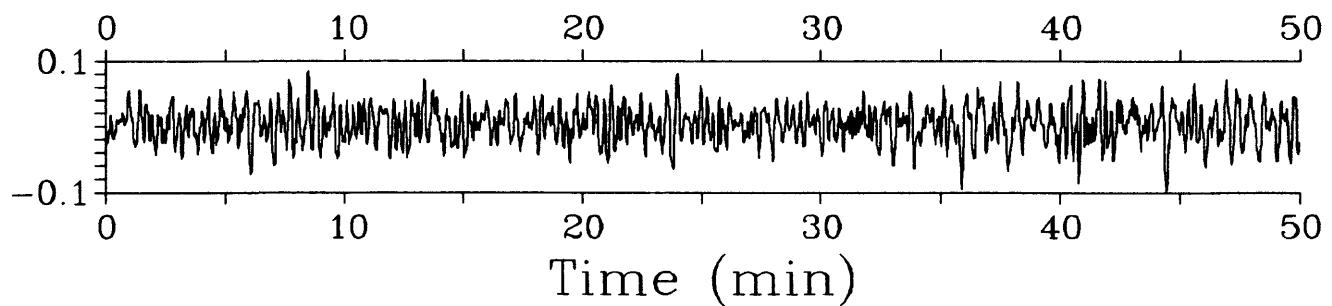
⁸² LPZ

09 January 1982 12:53:51.88

LPZ

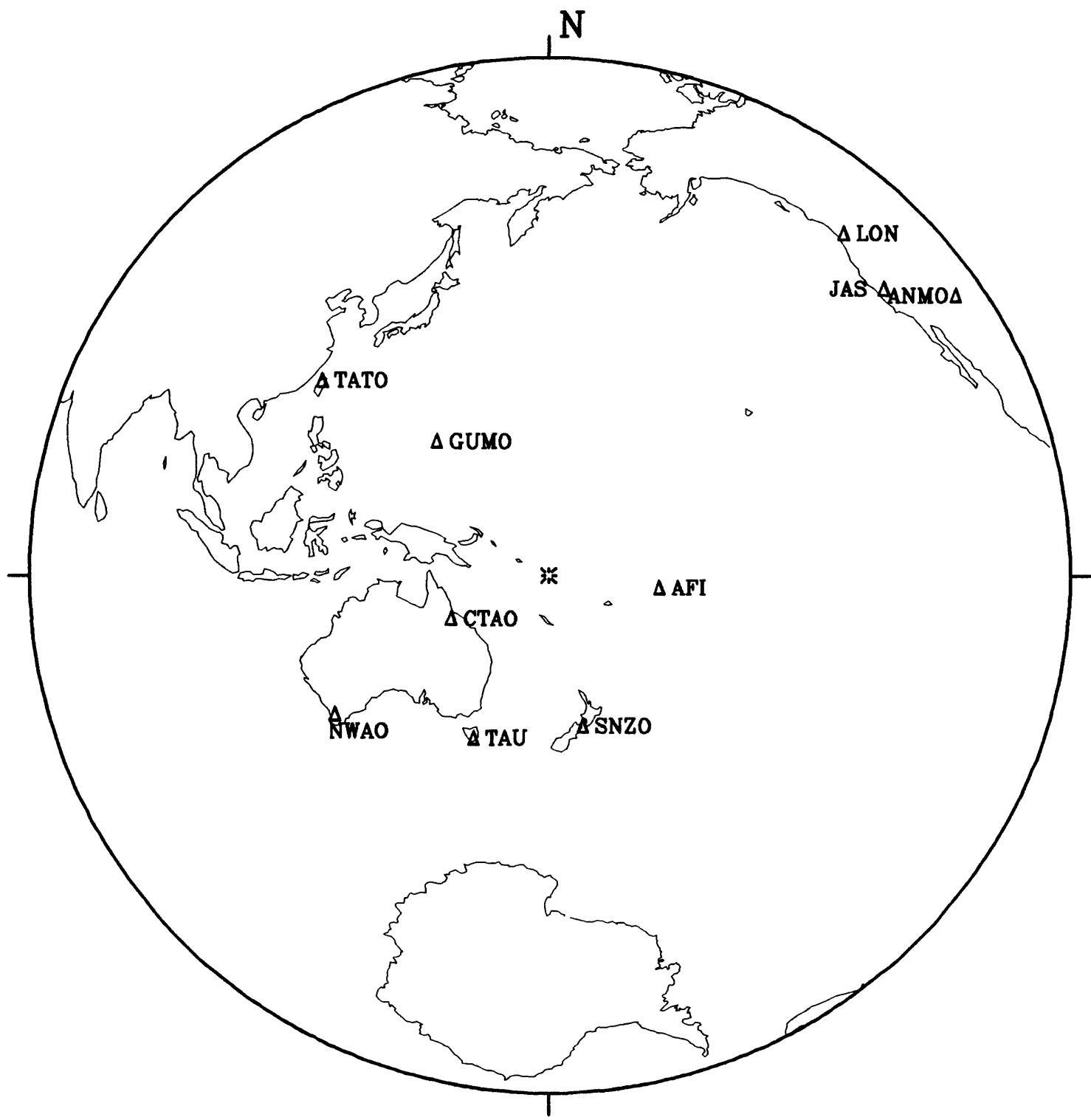
New Brunswick h=10.1 MB=5.7 ms=5.2

NWA0
13:12:56.9
 $\Delta=165.6$



05 August 1982 20:32:52.95

Santa Cruz Islands

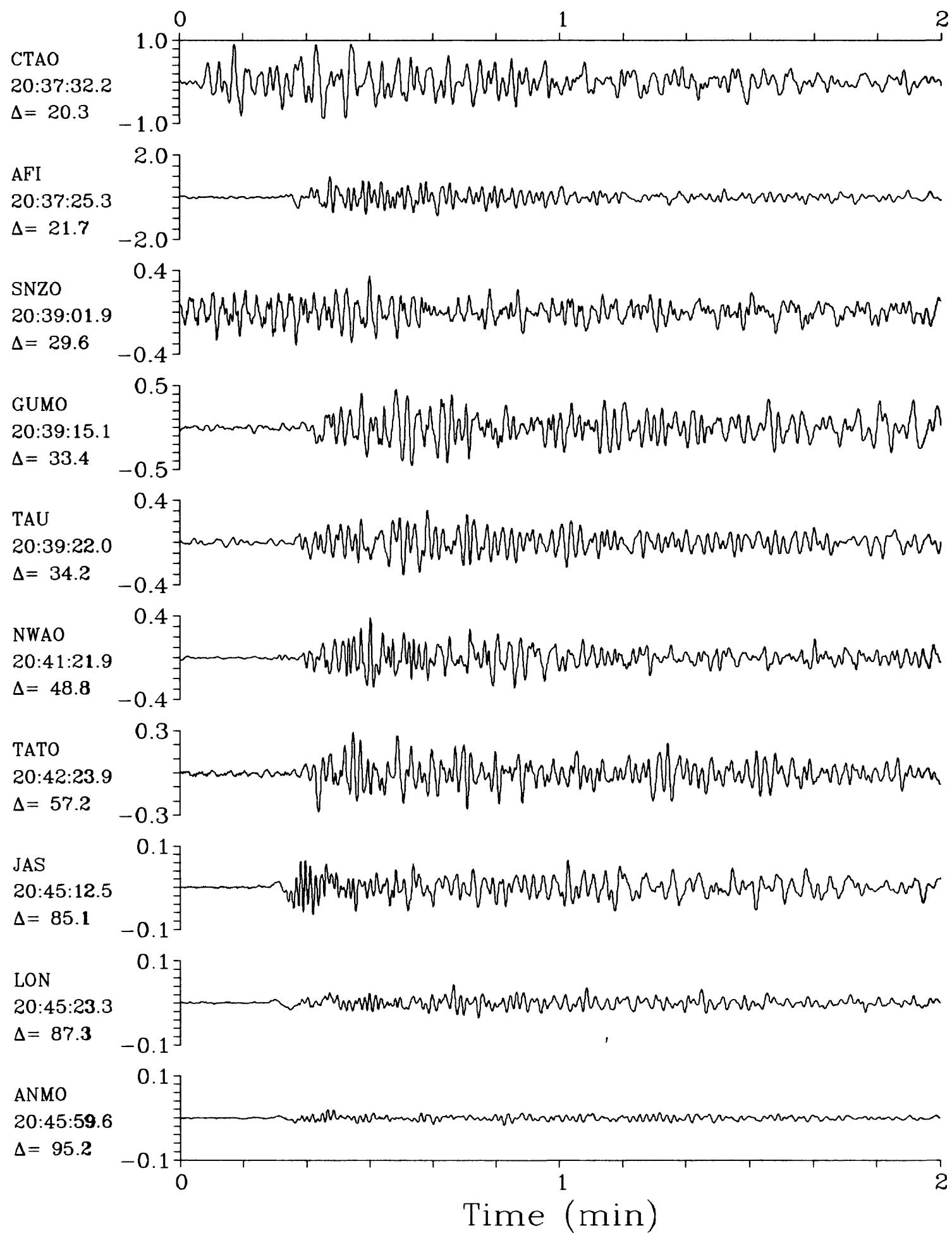


84 SPZ

05 August 1982 20:32:52.95

SPZ

Santa Cruz Islands h=30.7 MB=6.2 ms=7.1

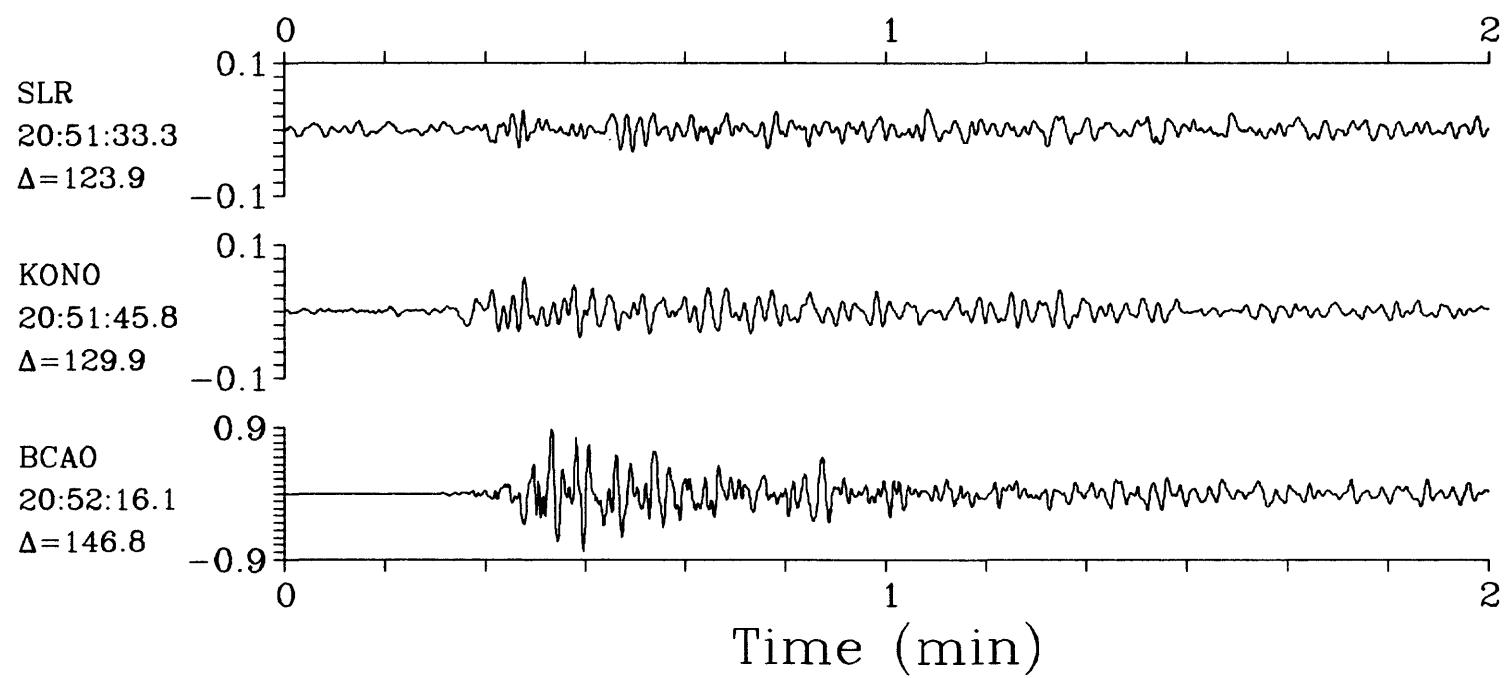


SPZ

05 August 1982 20:32:52.95

SPZ⁸⁵

Santa Cruz Islands h=30.7 MB=6.2 ms=7.1

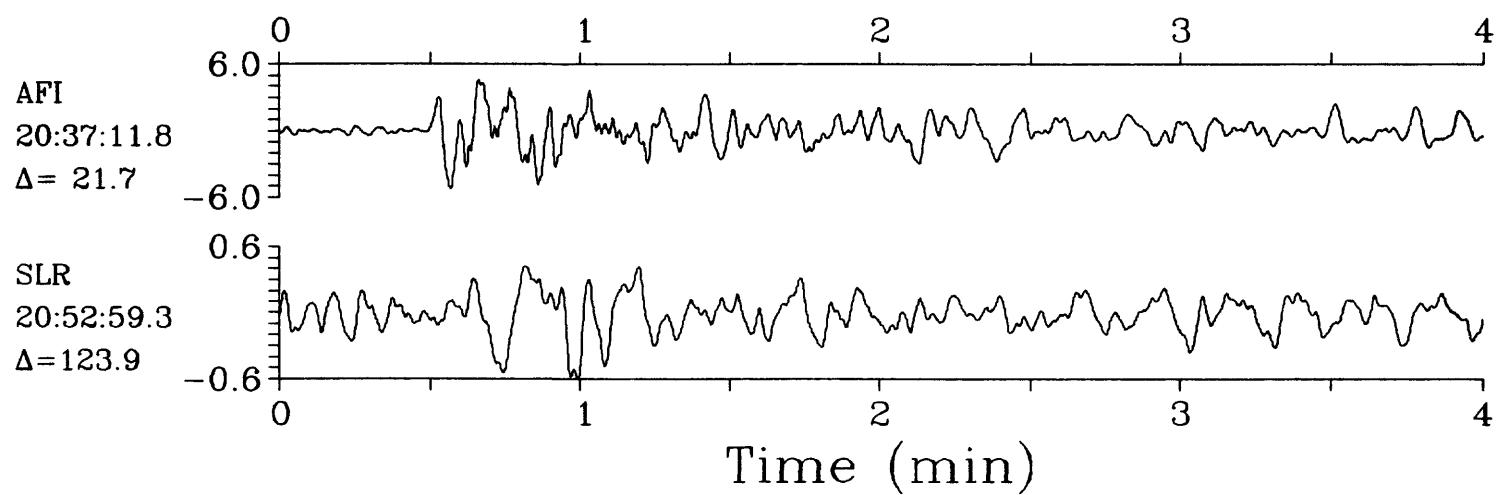


86 IPZ

05 August 1982 20:32:52.95

IPZ

Santa Cruz Islands h=30.7 MB=6.2 ms=7.1

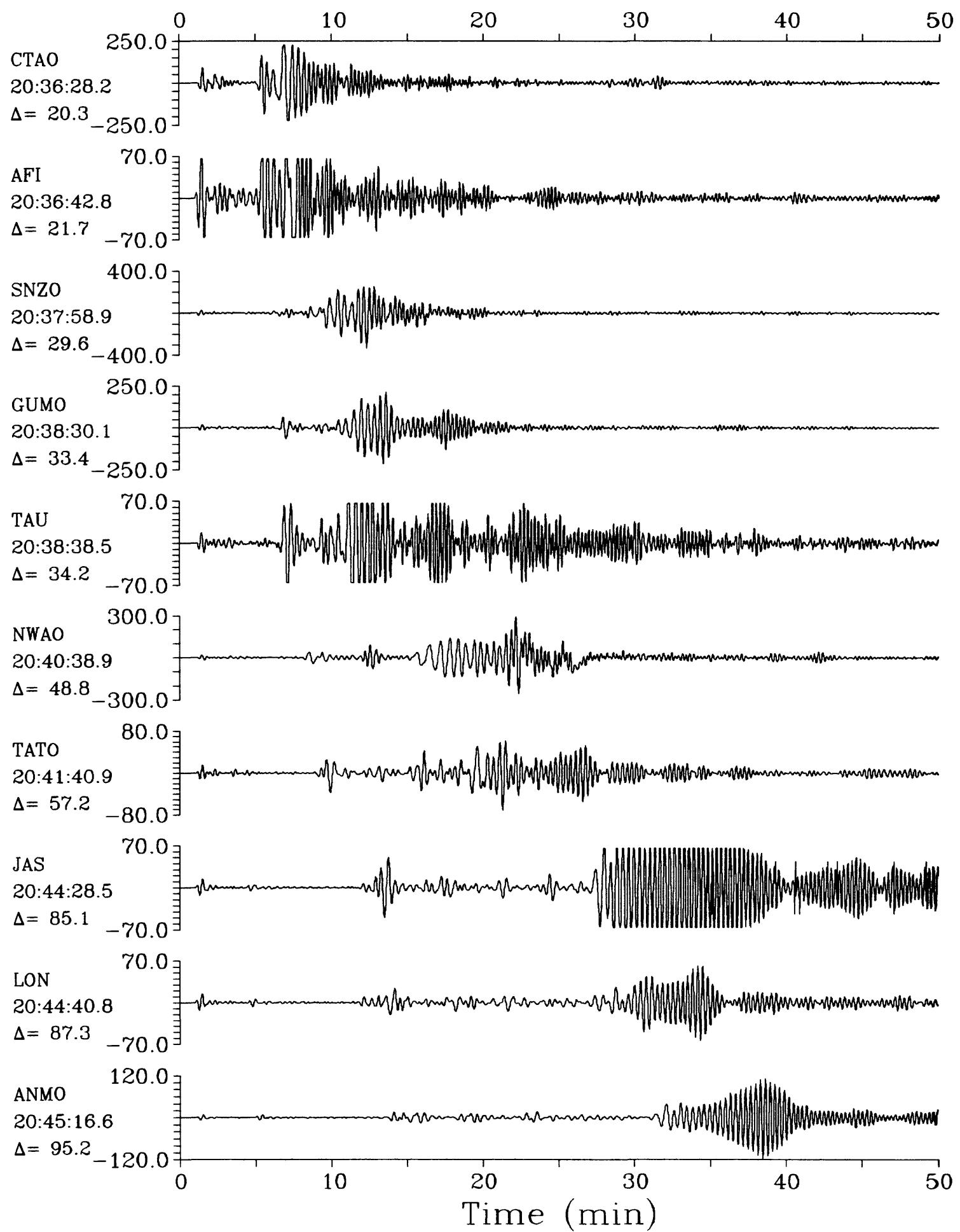


LPZ

05 August 1982 20:32:52.95

LPZ 87

Santa Cruz Islands h=30.7 MB=6.2 ms=7.1

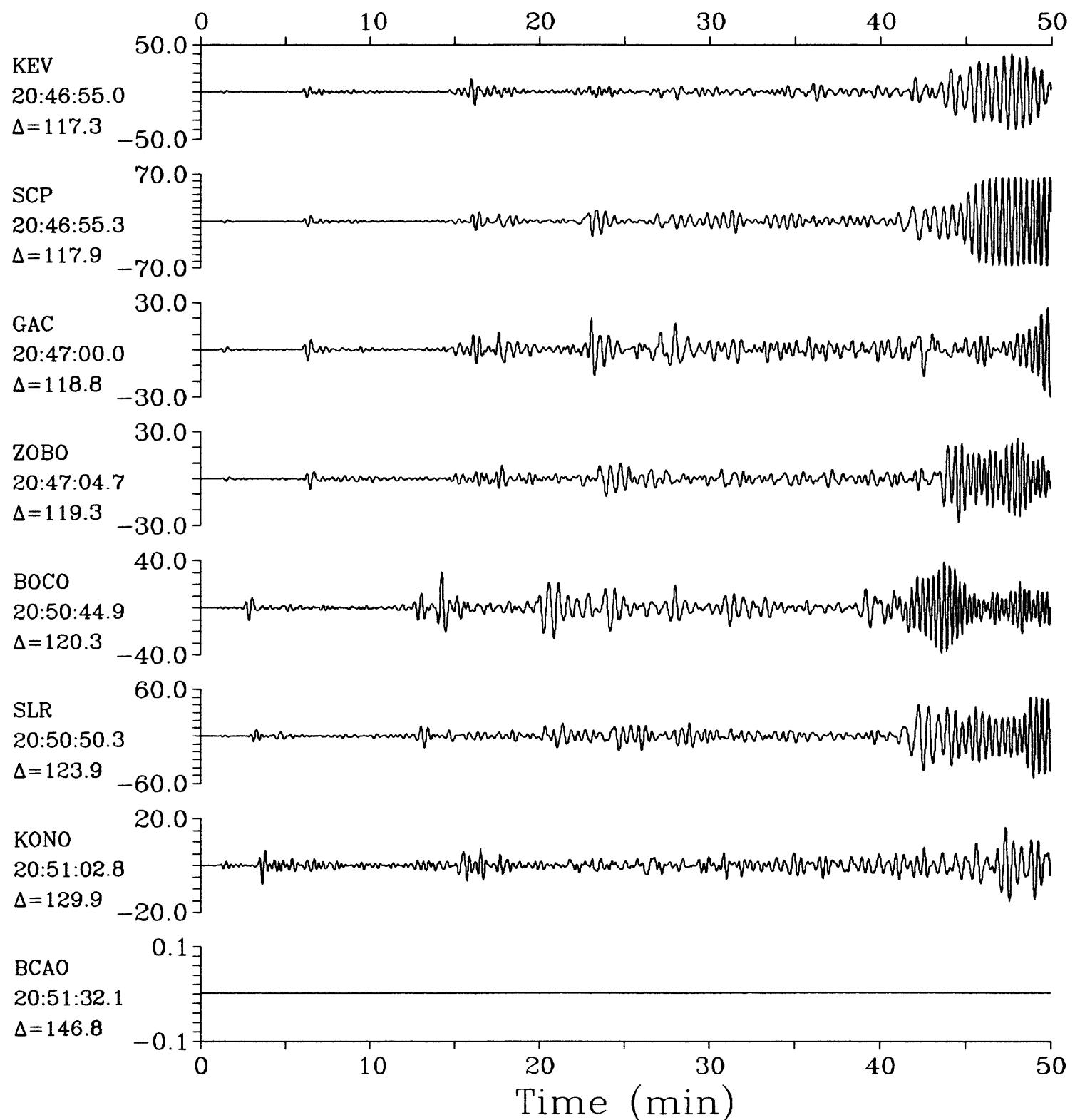


88 LPZ

05 August 1982 20:32:52.95

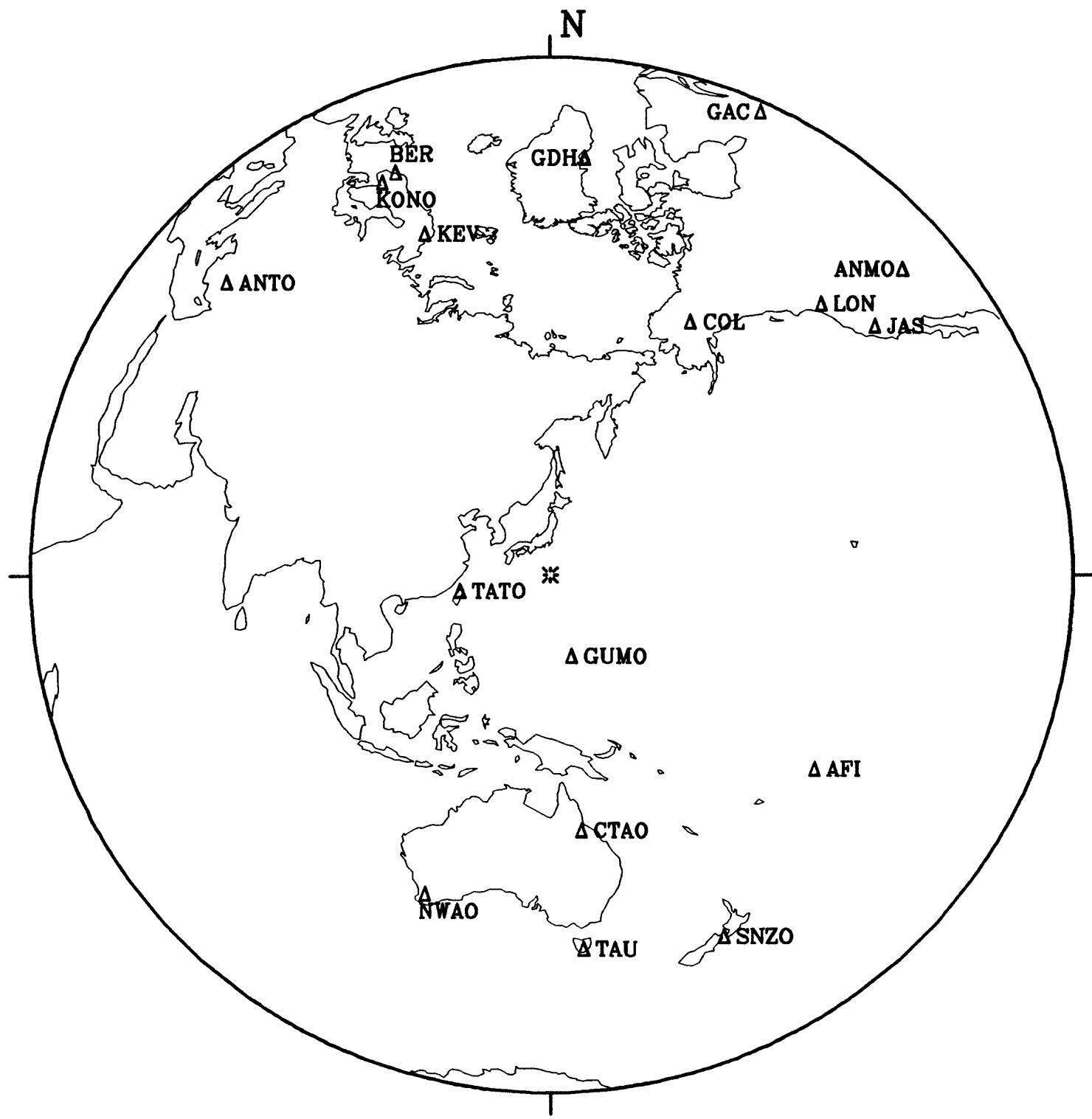
LPZ

Santa Cruz Islands h=30.7 MB=6.2 ms=7.1



06 September 1982 01:47:02.73

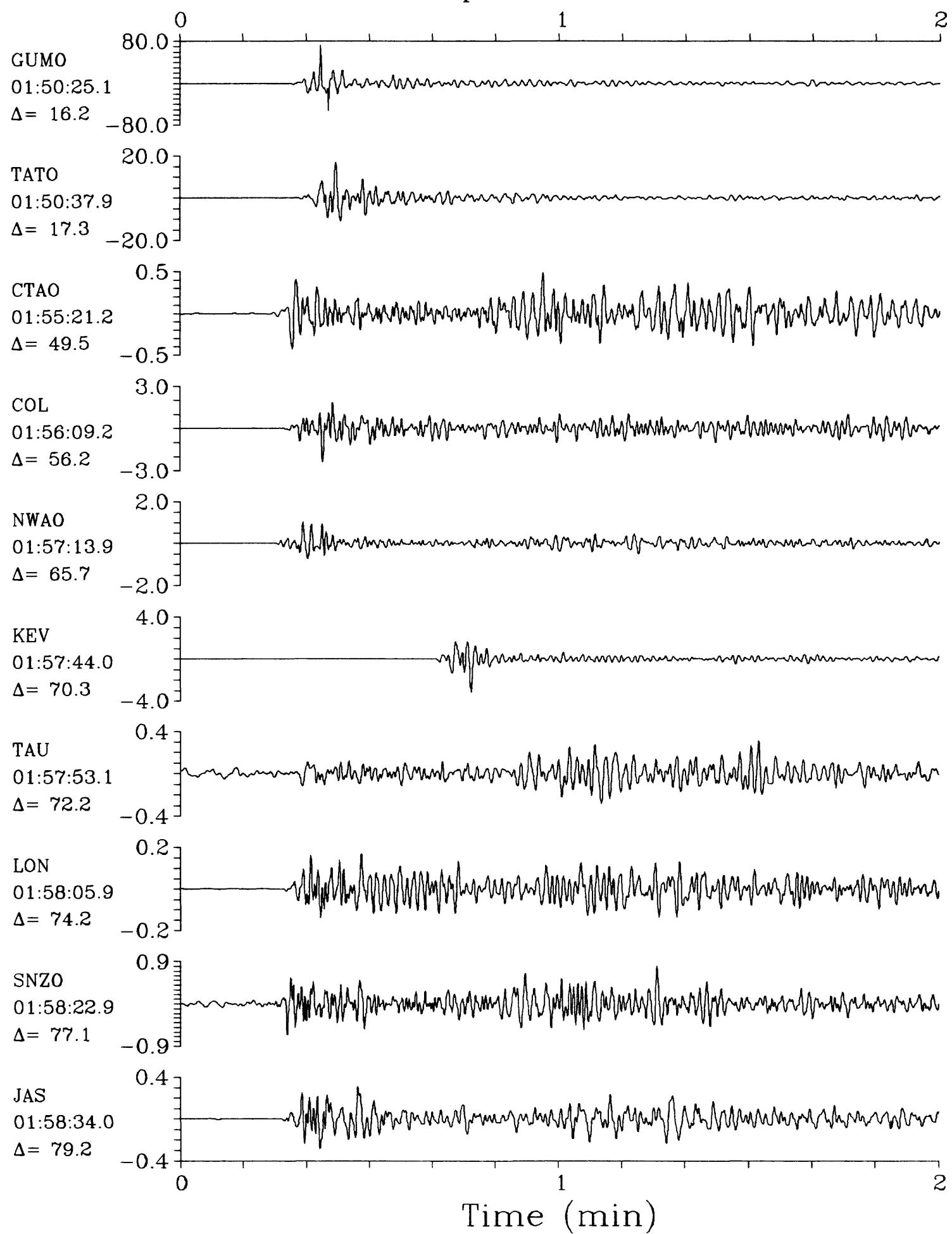
South of Honshu, Japan



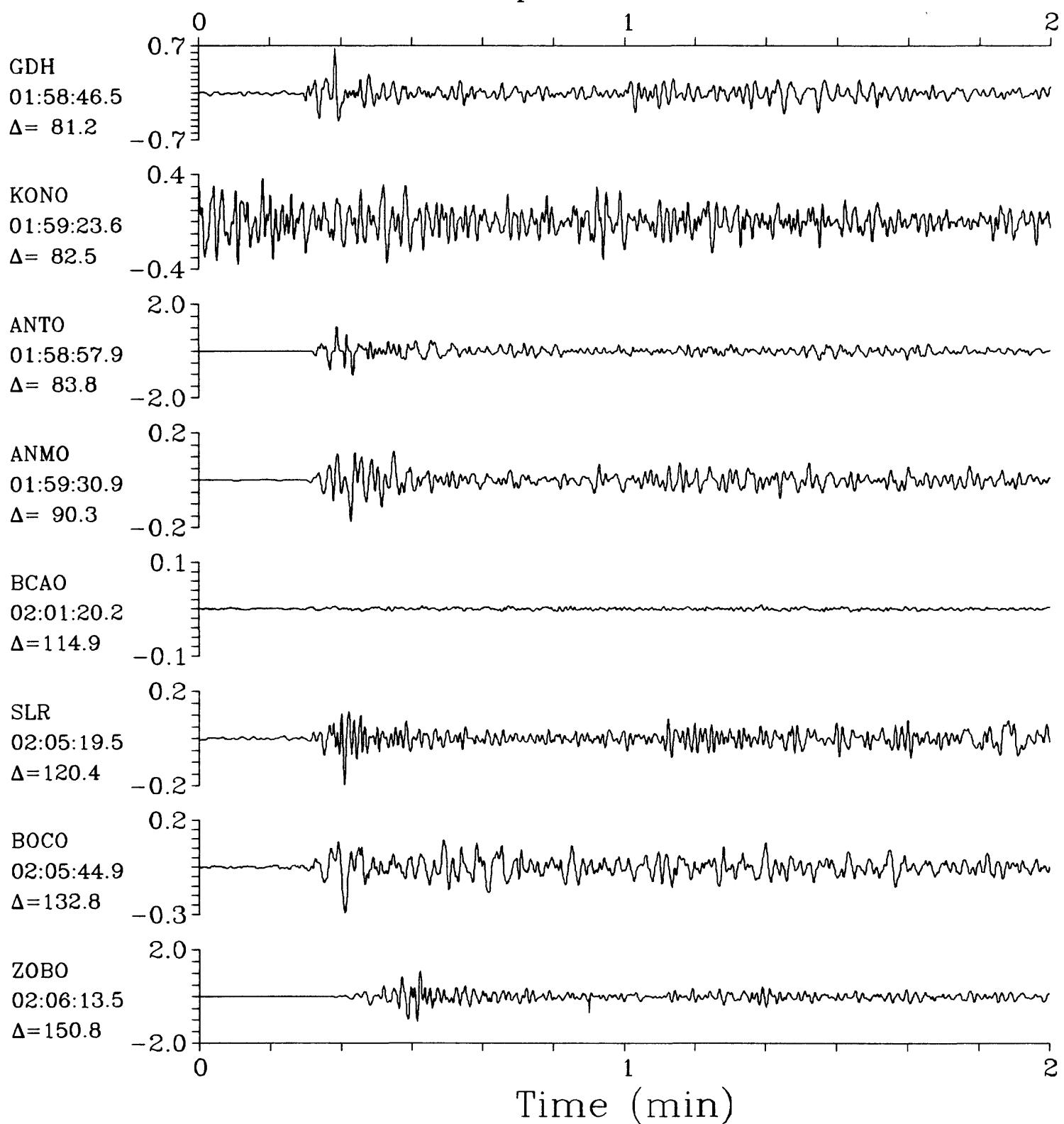
90 SPZ

06 September 1982 01:47:02.73
South of Honshu, Japan h=175.8 MB=6.5

SPZ

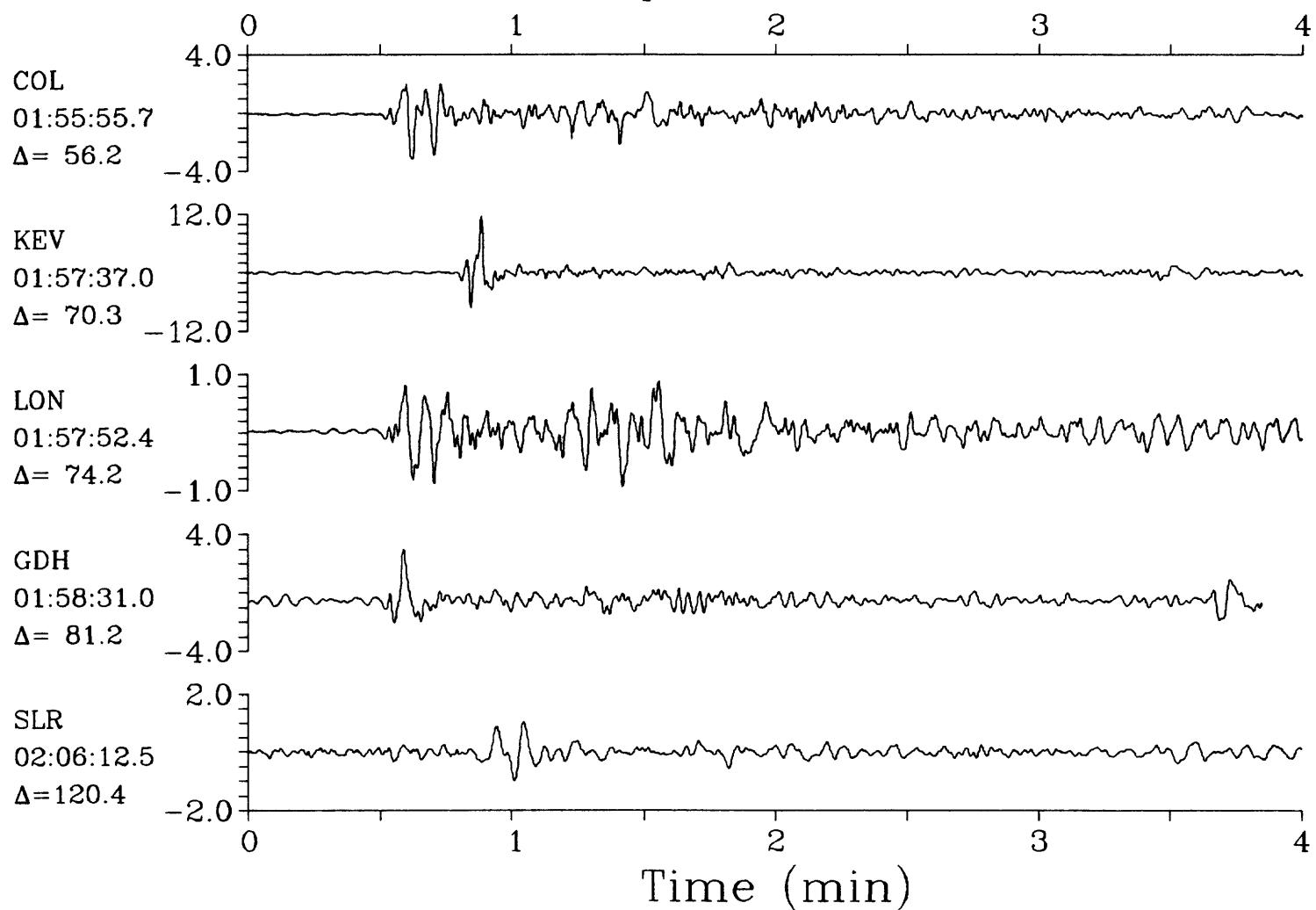


SPZ

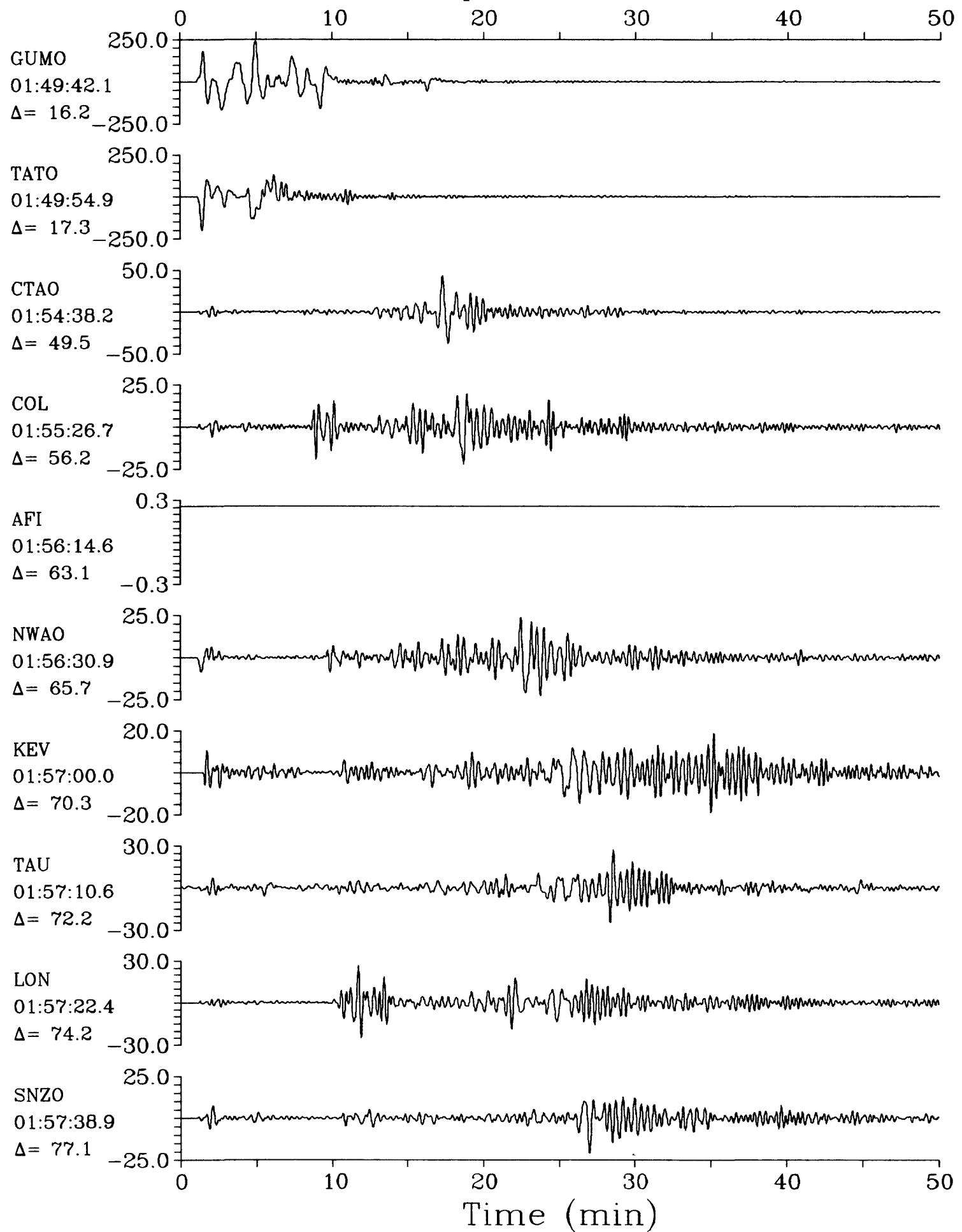
06 September 1982 01:47:02.73
South of Honshu, Japan h=175.8 MB=6.5SPZ⁹¹

9² IPZ06 September 1982 01:47:02.73
South of Honshu, Japan h=175.8 MB=6.5

IPZ



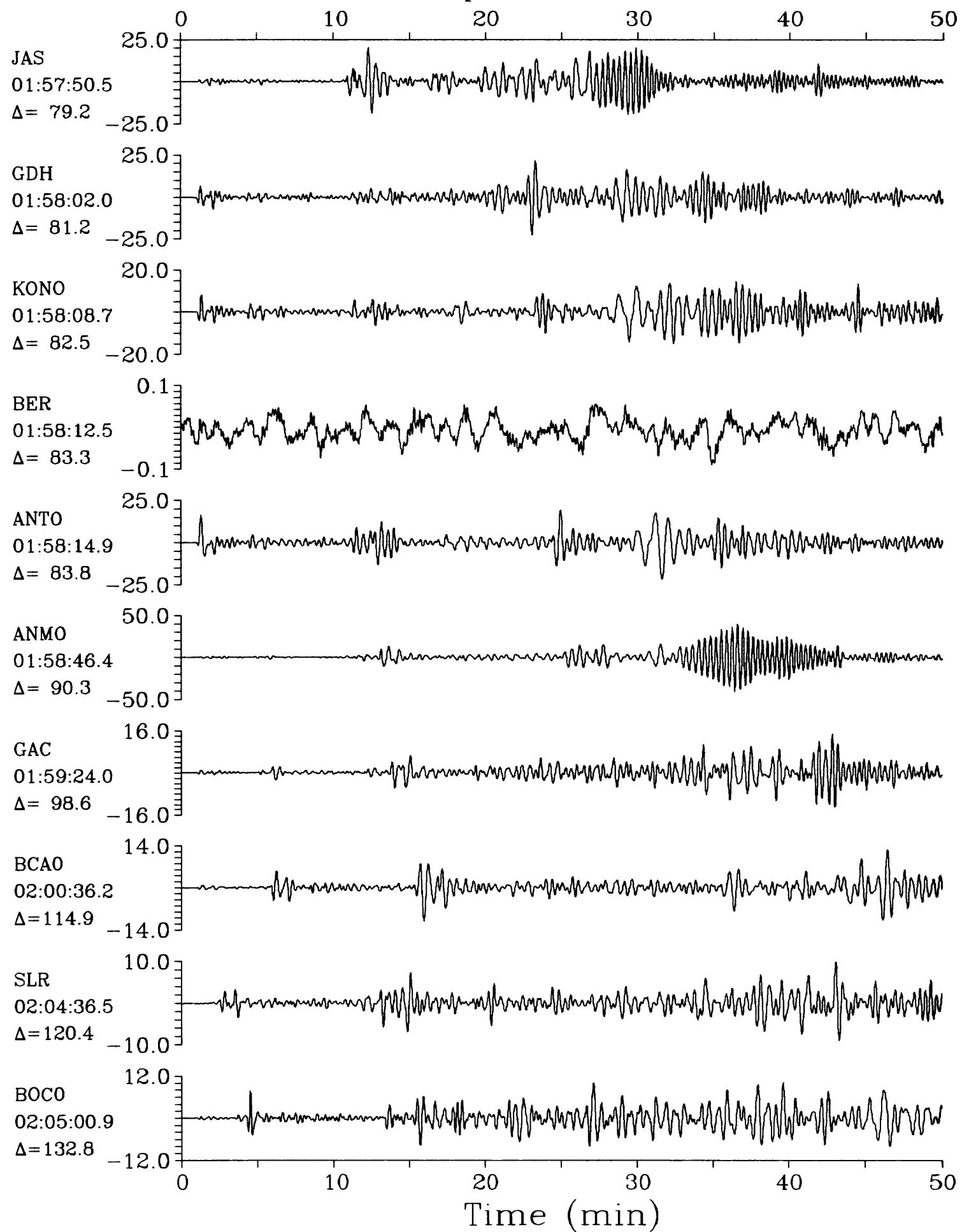
LPZ

06 September 1982 01:47:02.73
South of Honshu, Japan h=175.8 MB=6.5LPZ⁹³

94 LPZ

06 September 1982 01:47:02.73
South of Honshu, Japan h=175.8 MB=6.5

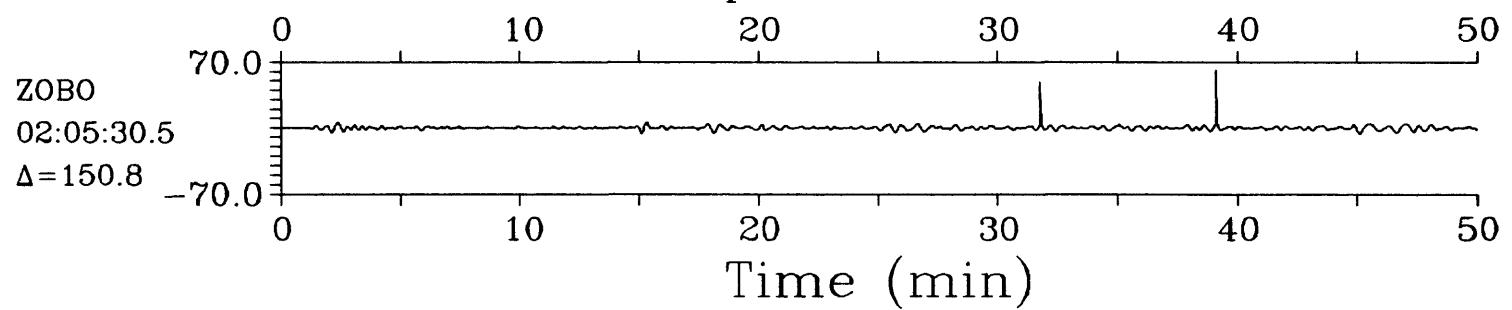
LPZ



LPZ

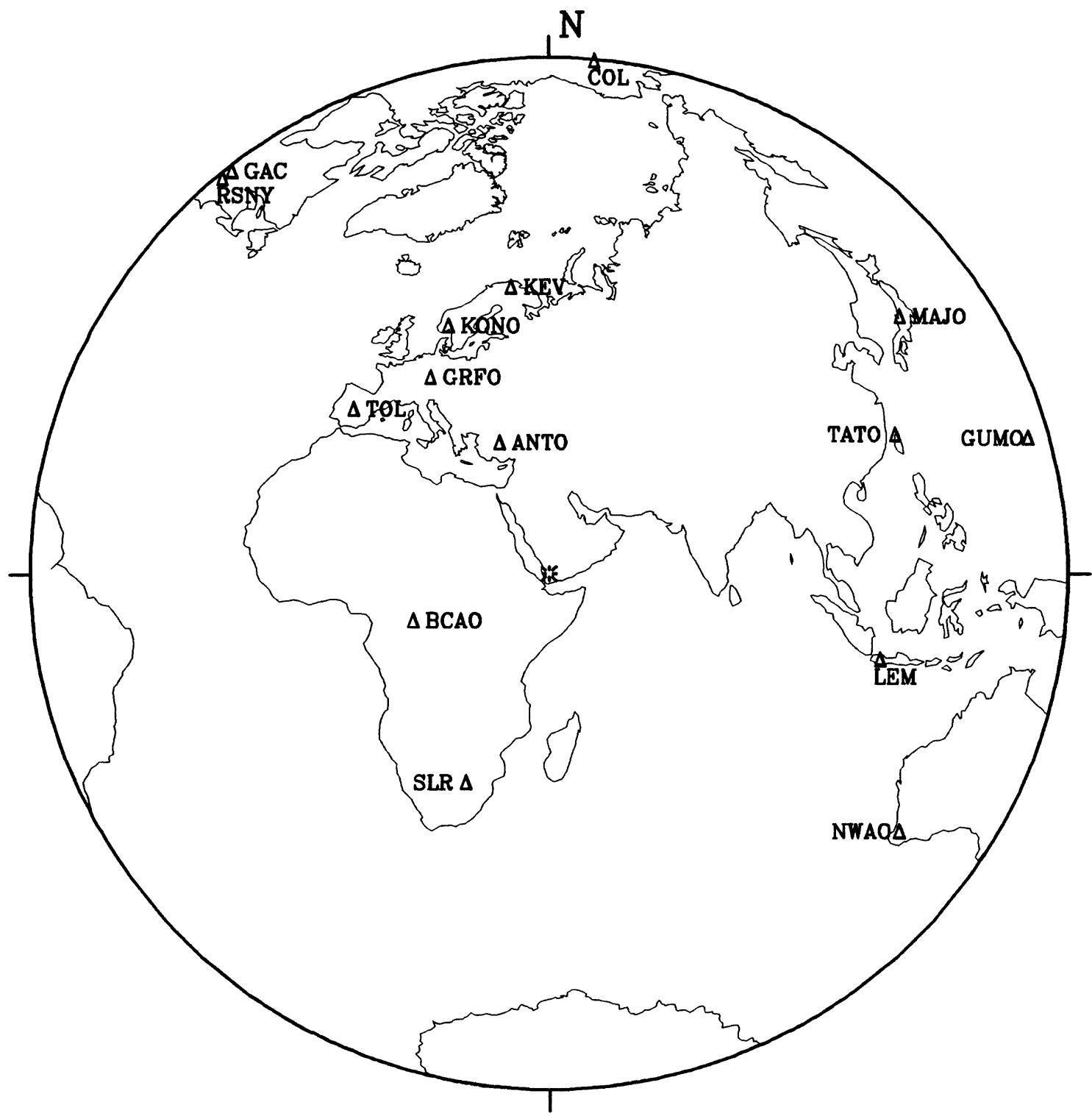
06 September 1982 01:47:02.73
South of Honshu, Japan h=175.8 MB=6.5

LPZ 95



13 December 1982 09:12:48.05

Western Arabian Peninsula

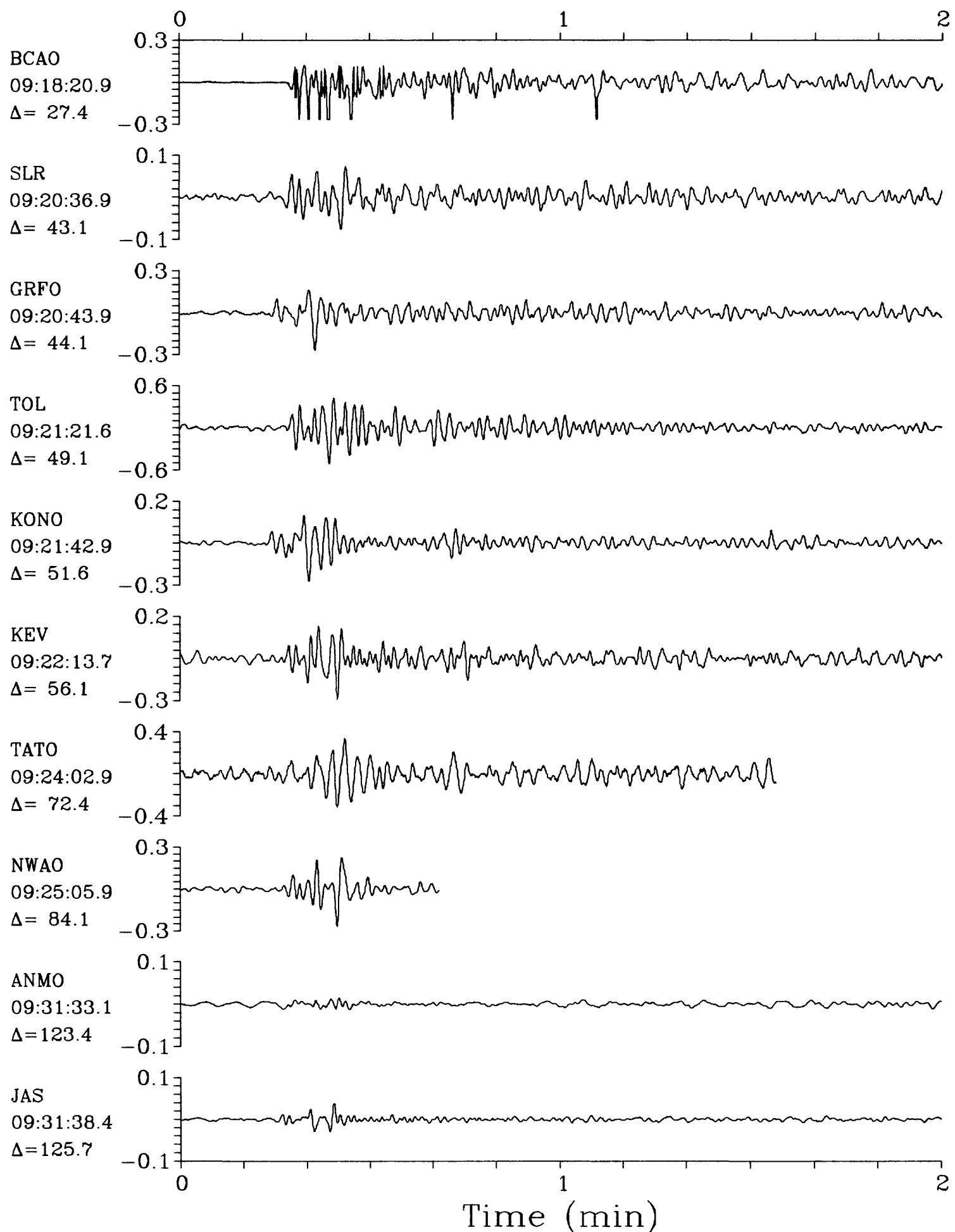


SPZ

13 December 1982 09:12:48.05

SPZ⁹⁷

Western Arabian Peninsula h=5.0 MB=6.0 ms=6.0

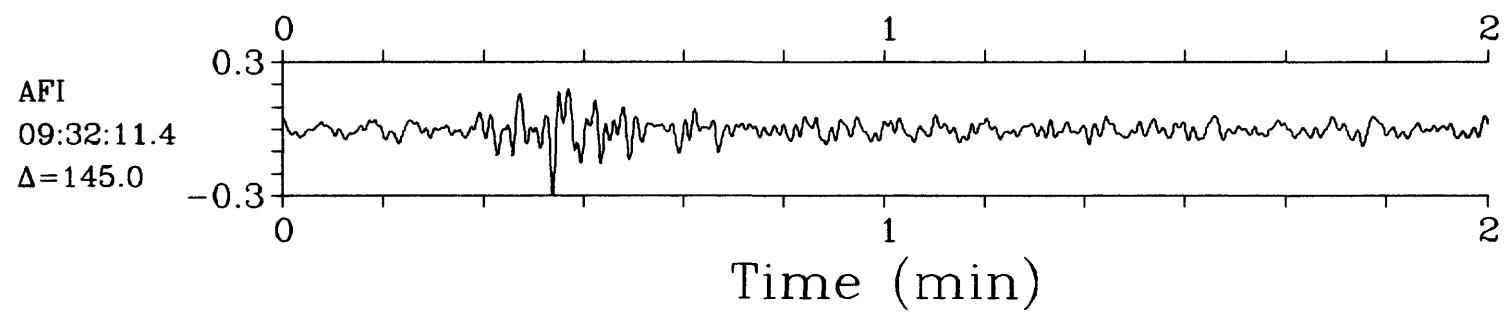


98 SPZ

13 December 1982 09:12:48.05

SPZ

Western Arabian Peninsula h=5.0 MB=6.0 ms=6.0

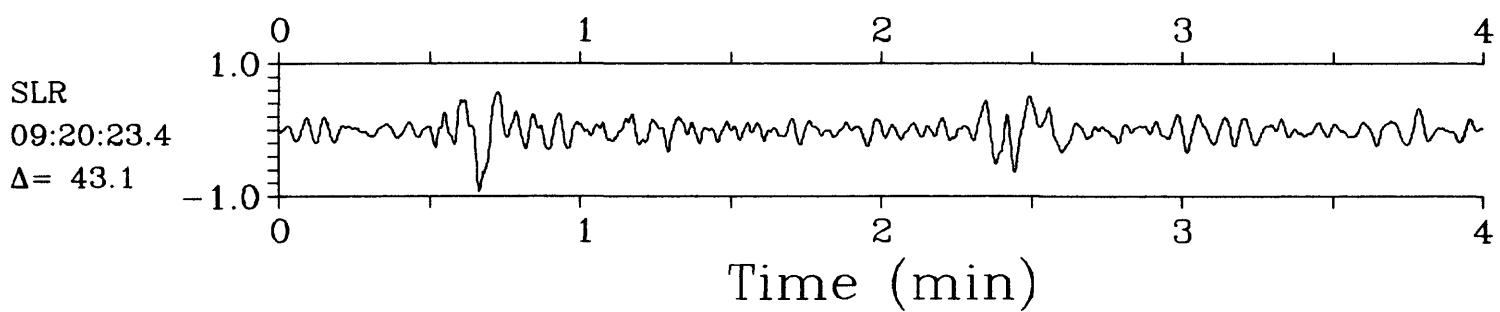


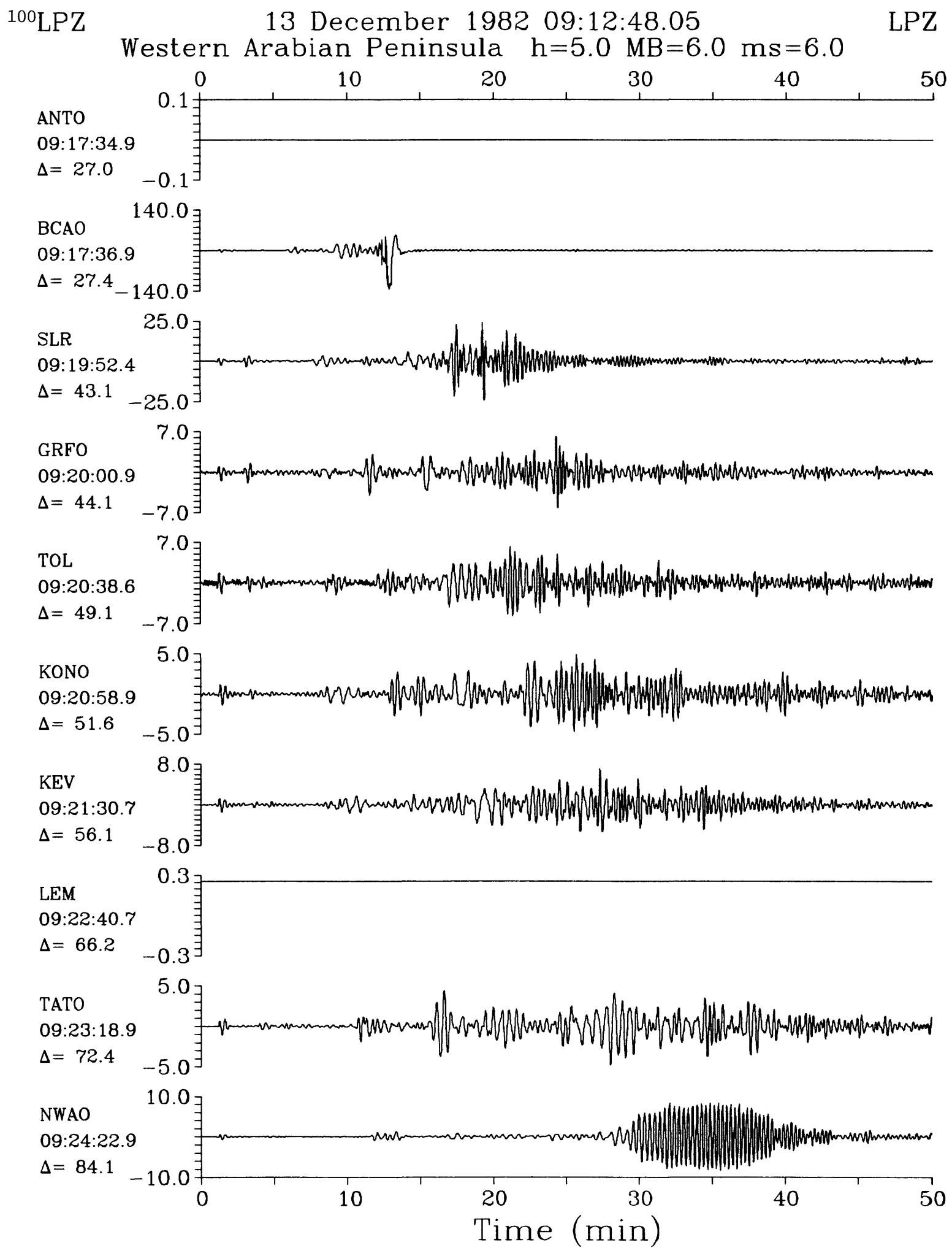
IPZ

13 December 1982 09:12:48.05

IPZ⁹⁹

Western Arabian Peninsula h=5.0 MB=6.0 ms=6.0



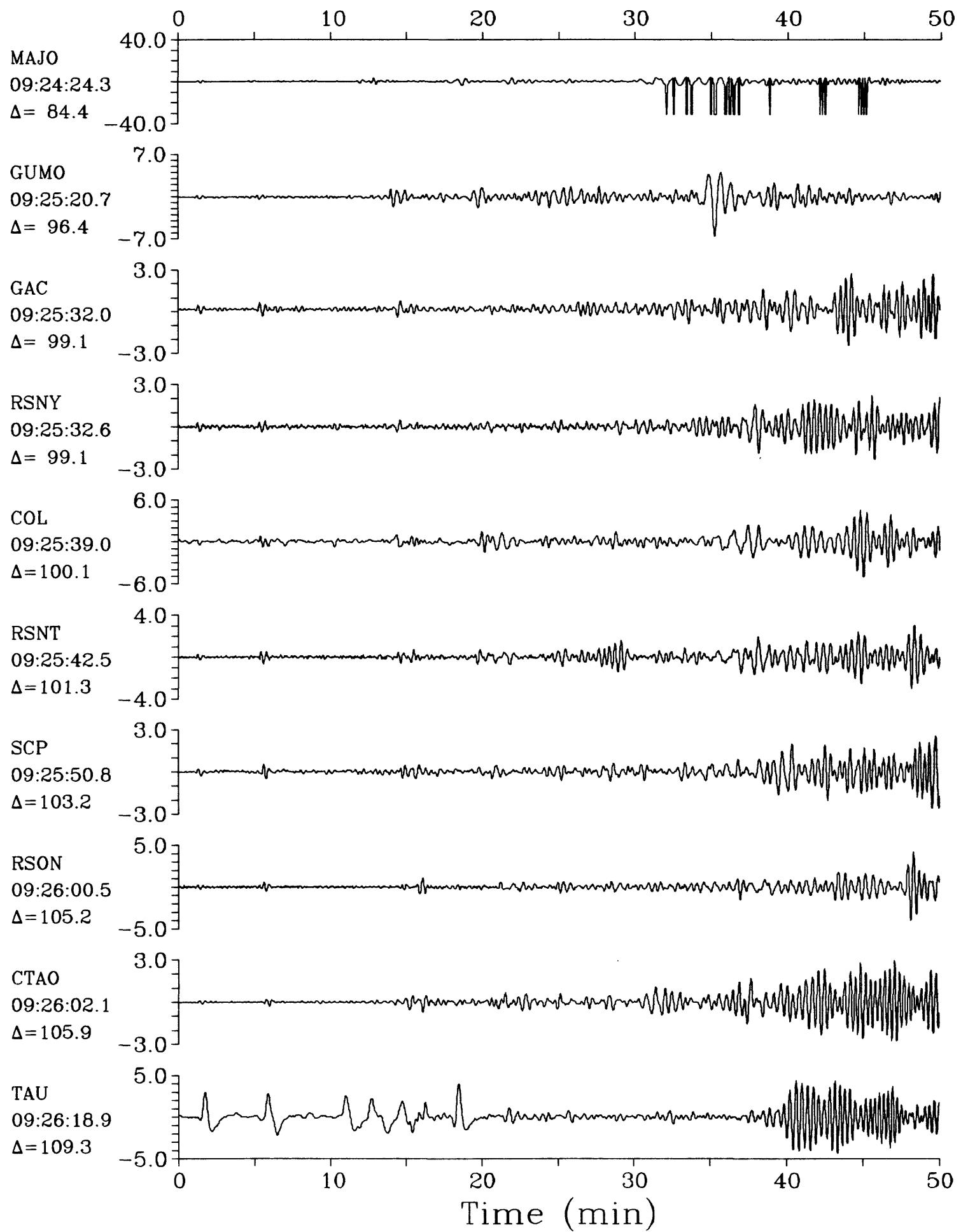


LPZ

13 December 1982 09:12:48.05

LPZ¹⁰¹

Western Arabian Peninsula h=5.0 MB=6.0 ms=6.0

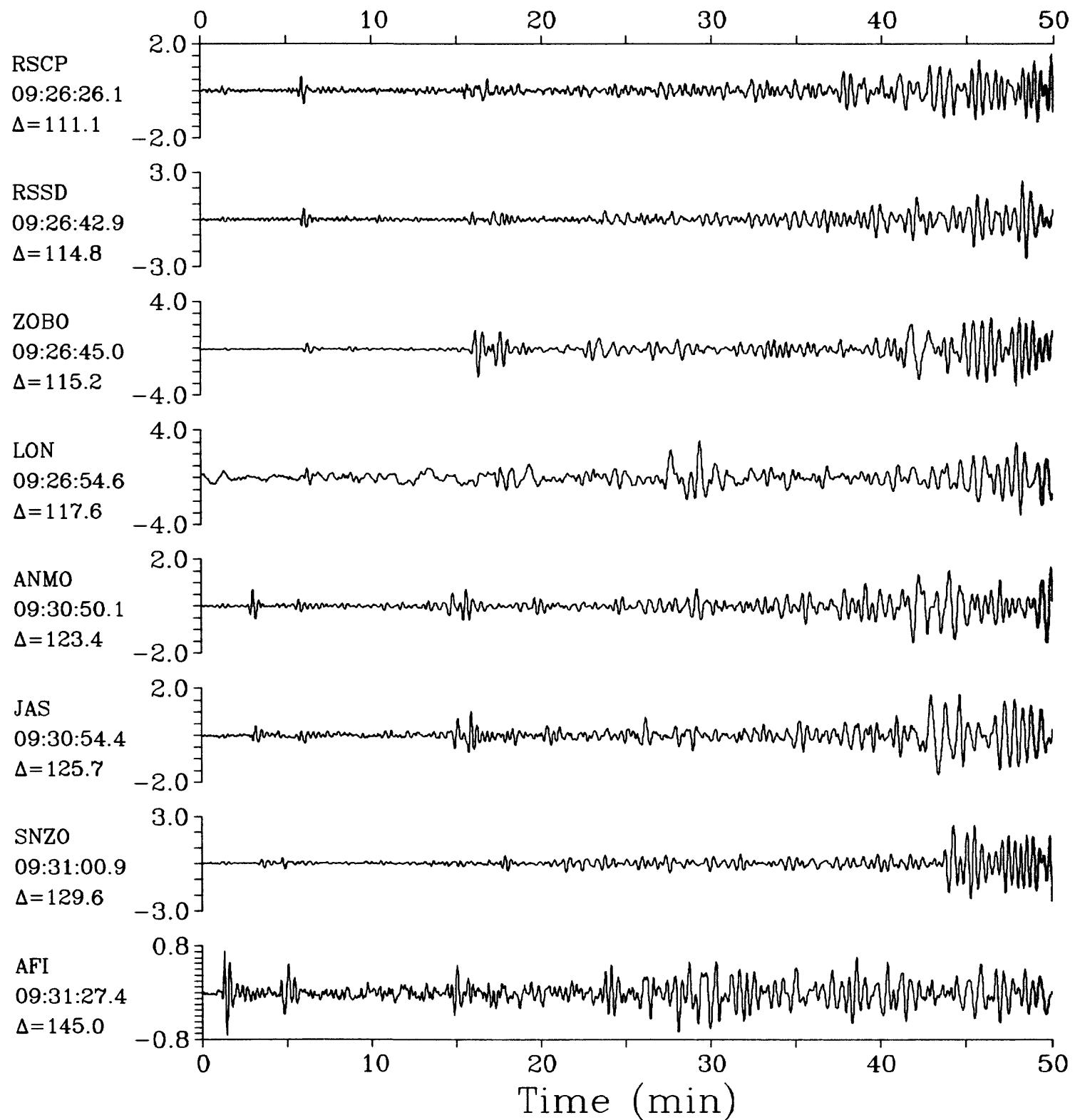


10² LPZ

13 December 1982 09:12:48.05

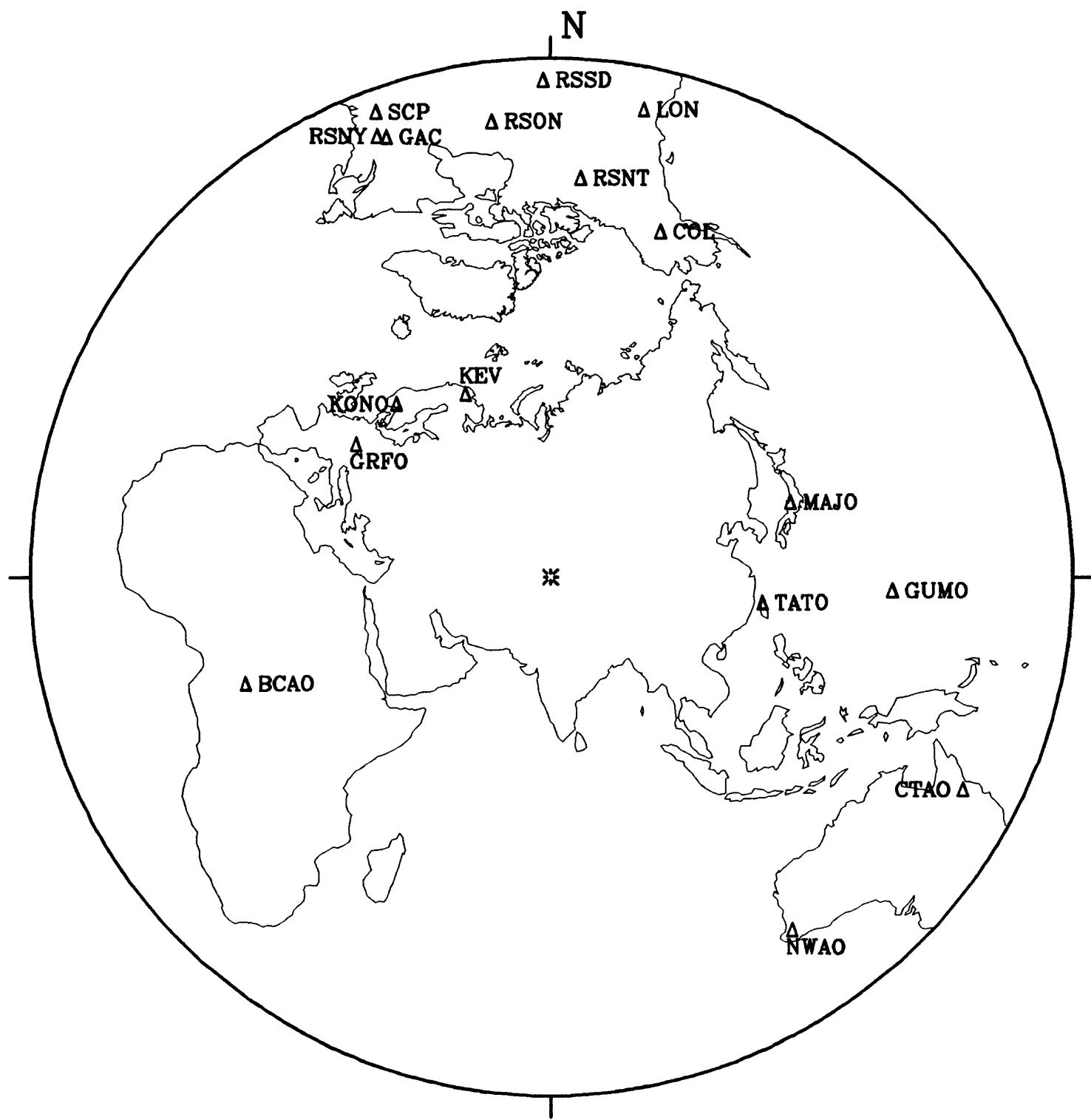
LPZ

Western Arabian Peninsula h=5.0 MB=6.0 ms=6.0



13 February 1983 01:40:10.98

Southern Xinjiang, China

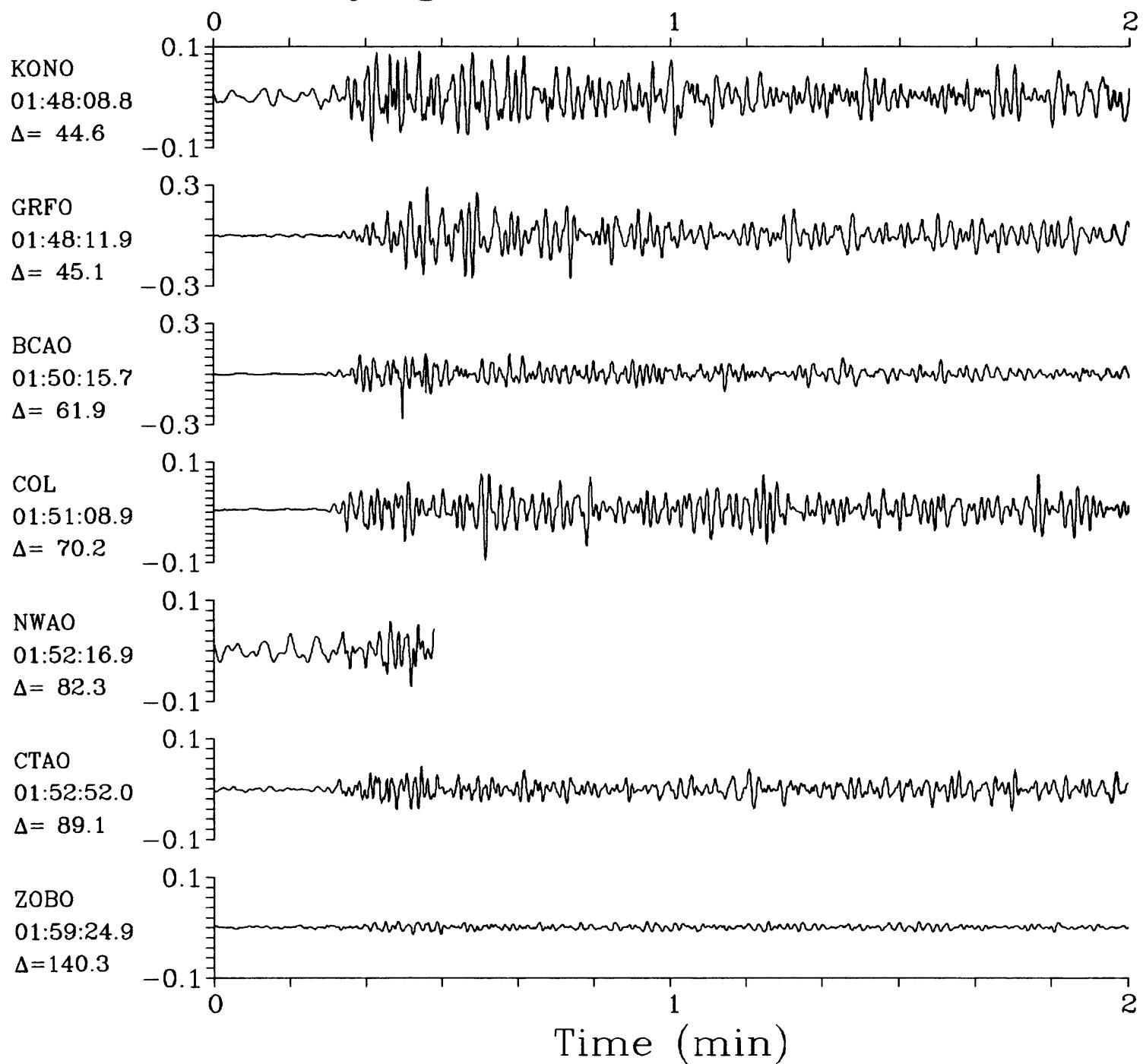


104 SPZ

13 February 1983 01:40:10.98

SPZ

Southern Xinjiang, China h=16.1 MB=5.6 ms=6.2

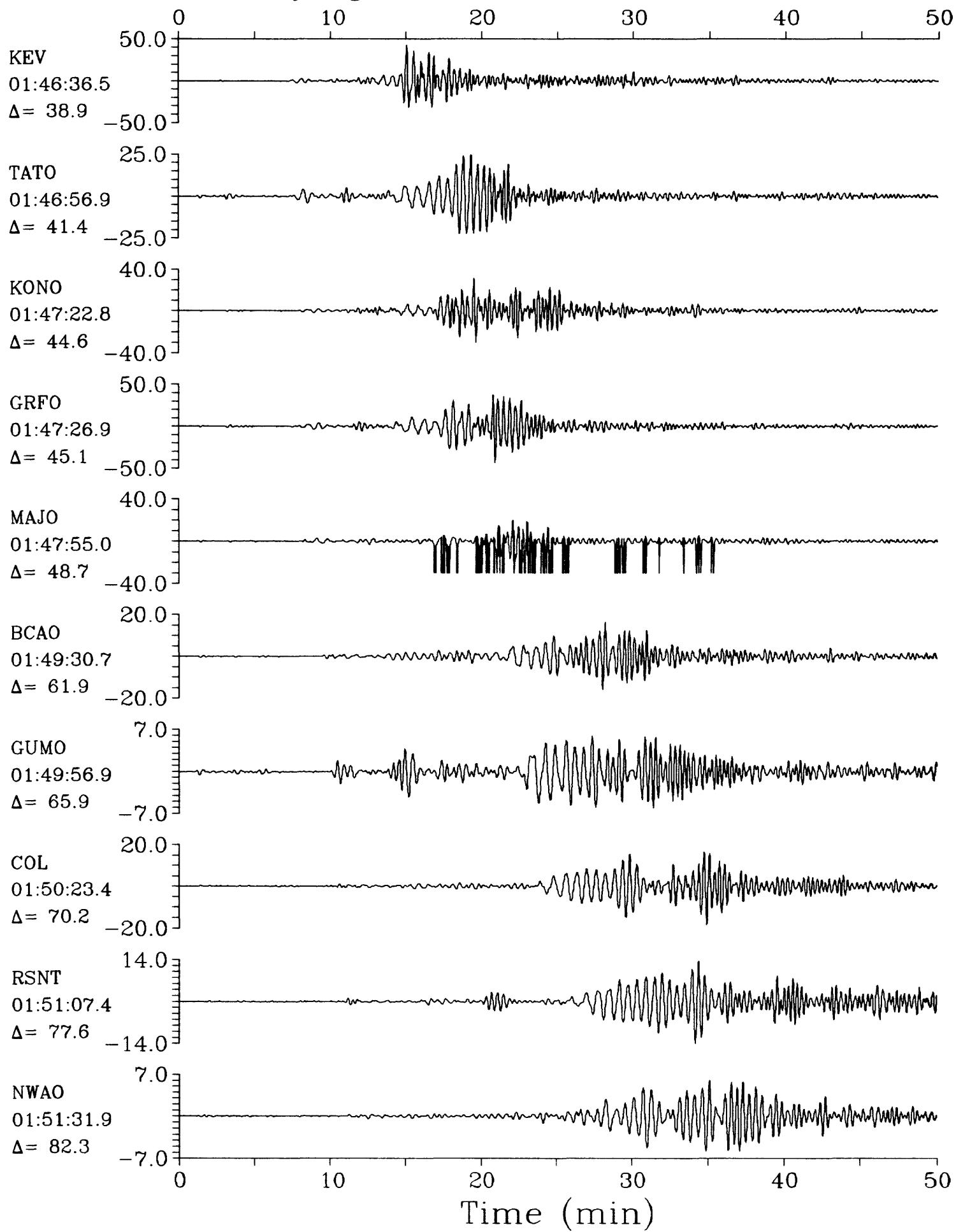


LPZ

13 February 1983 01:40:10.98

LPZ¹⁰⁵

Southern Xinjiang, China h=16.1 MB=5.6 ms=6.2

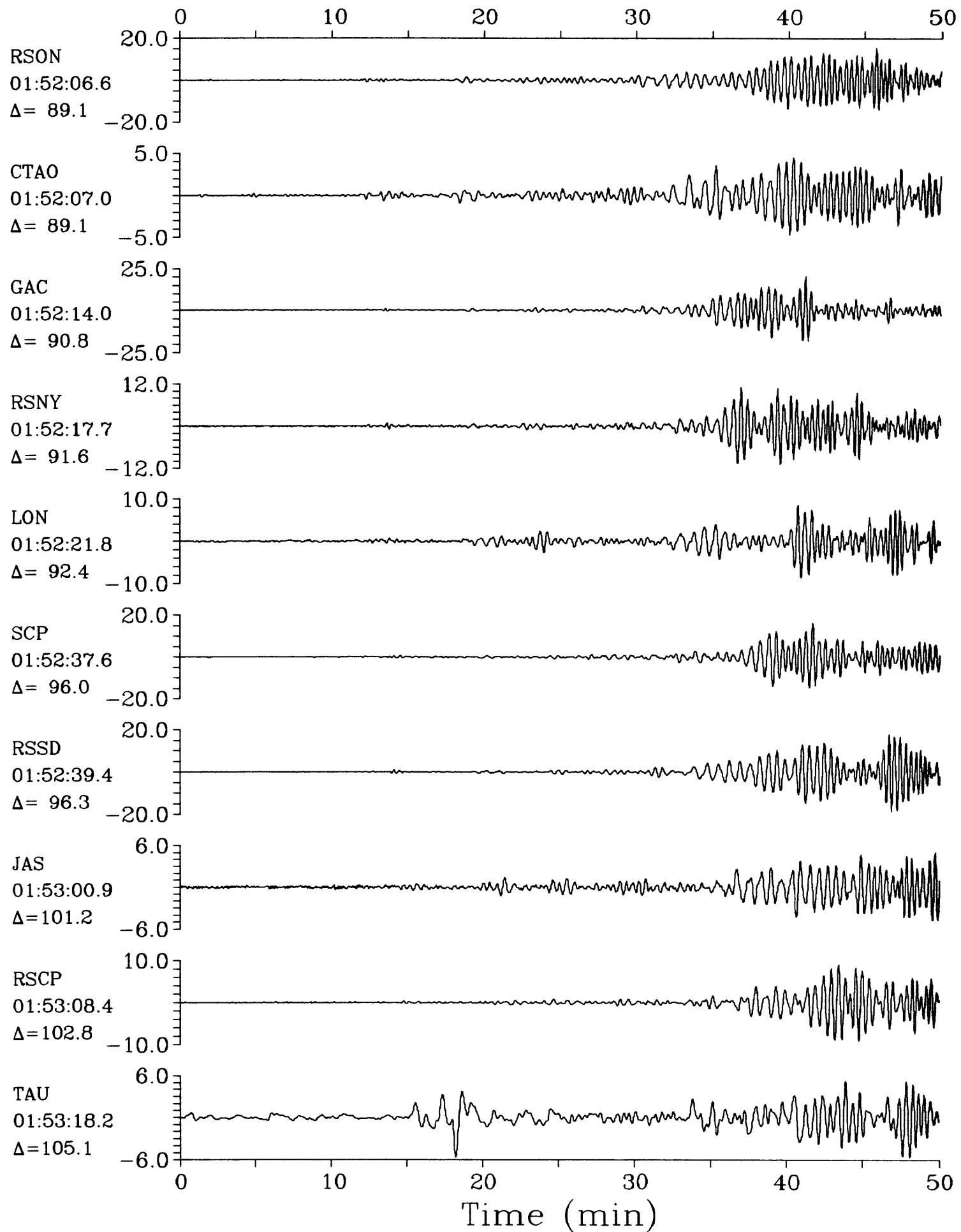


10⁶ LPZ

13 February 1983 01:40:10.98

LPZ

Southern Xinjiang, China h=16.1 MB=5.6 ms=6.2

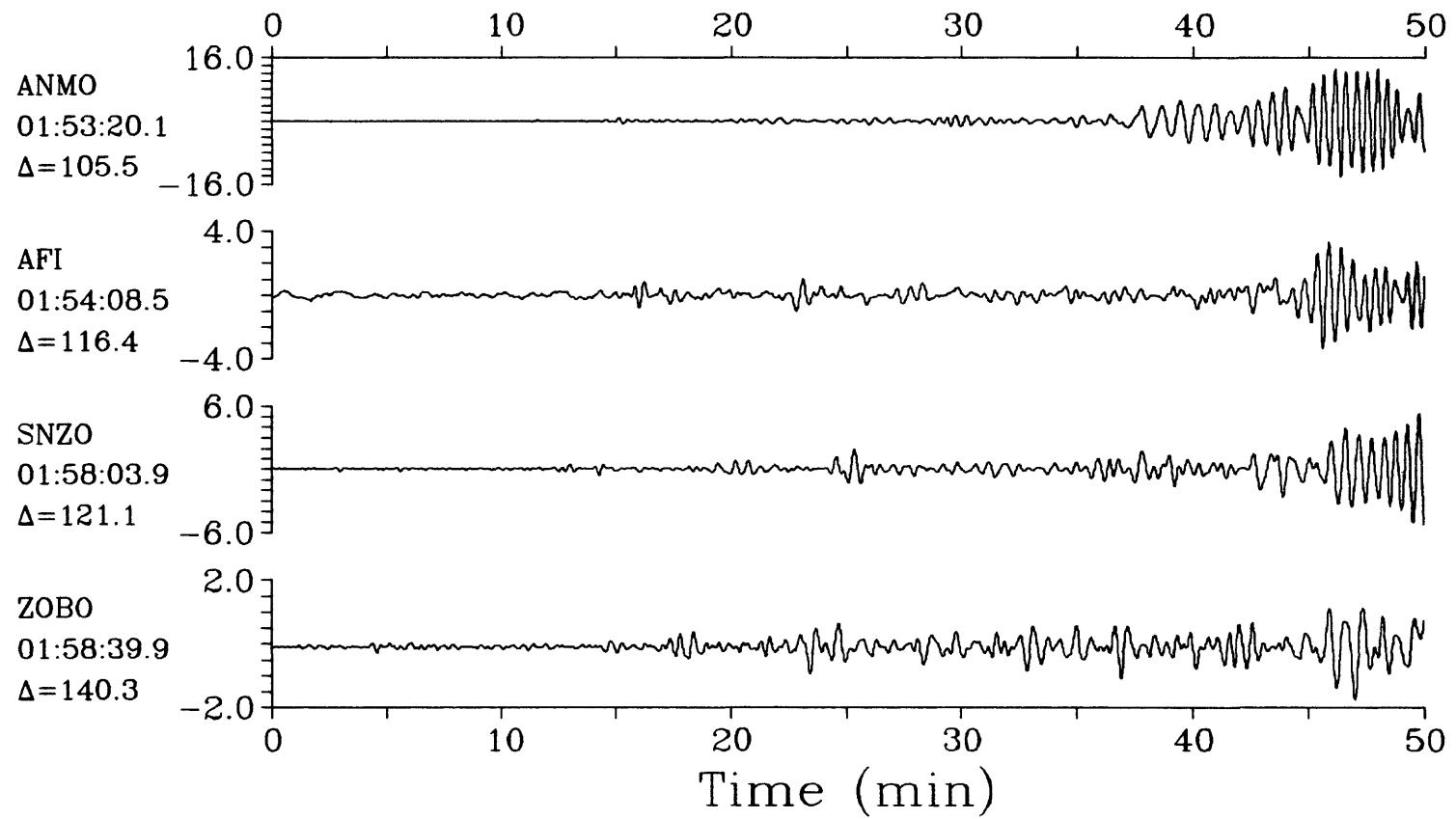


LPZ

13 February 1983 01:40:10.98

LPZ¹⁰⁷

Southern Xinjiang, China h=16.1 MB=5.6 ms=6.2

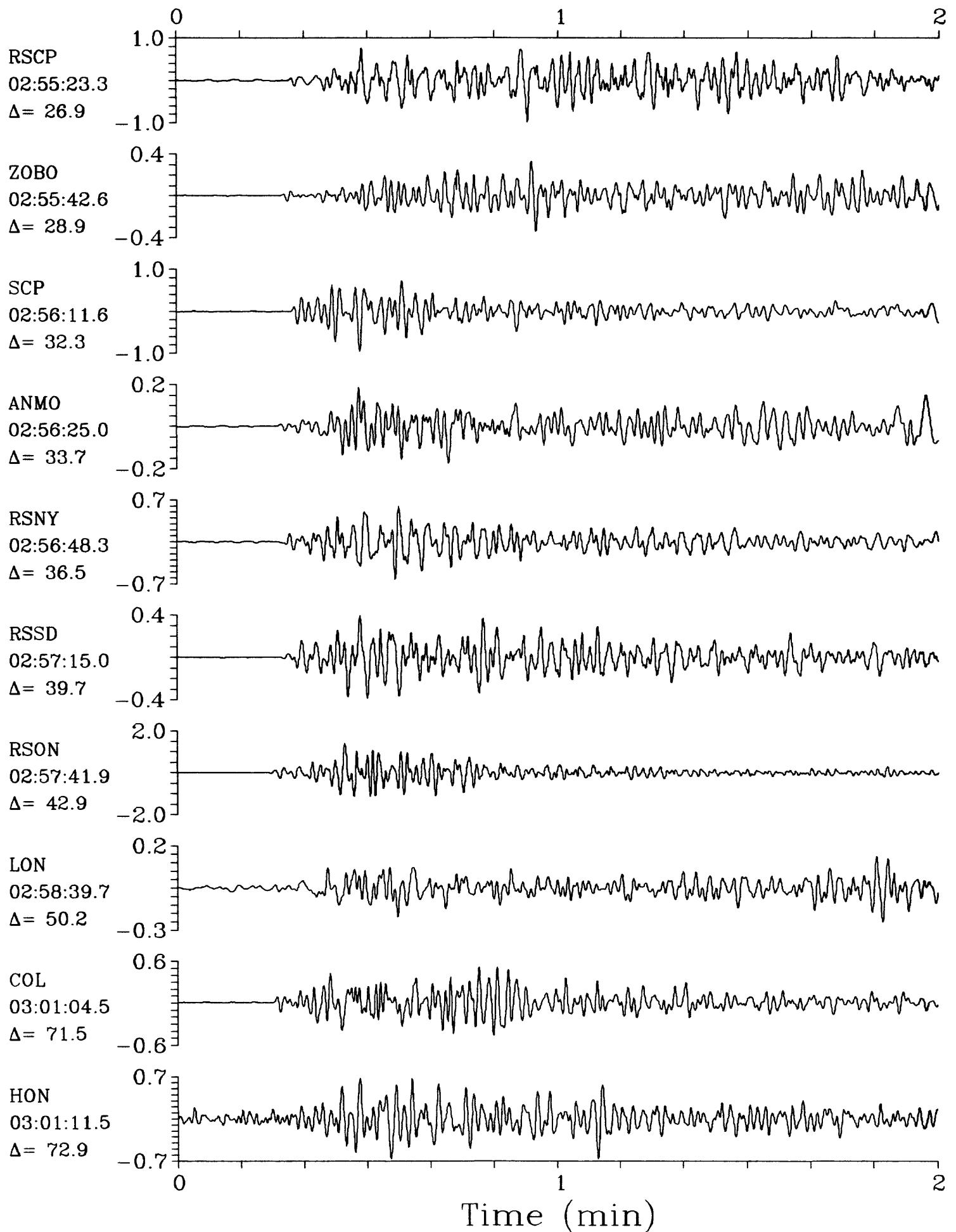


03 April 1983 02:50:01.18

Costa Rica



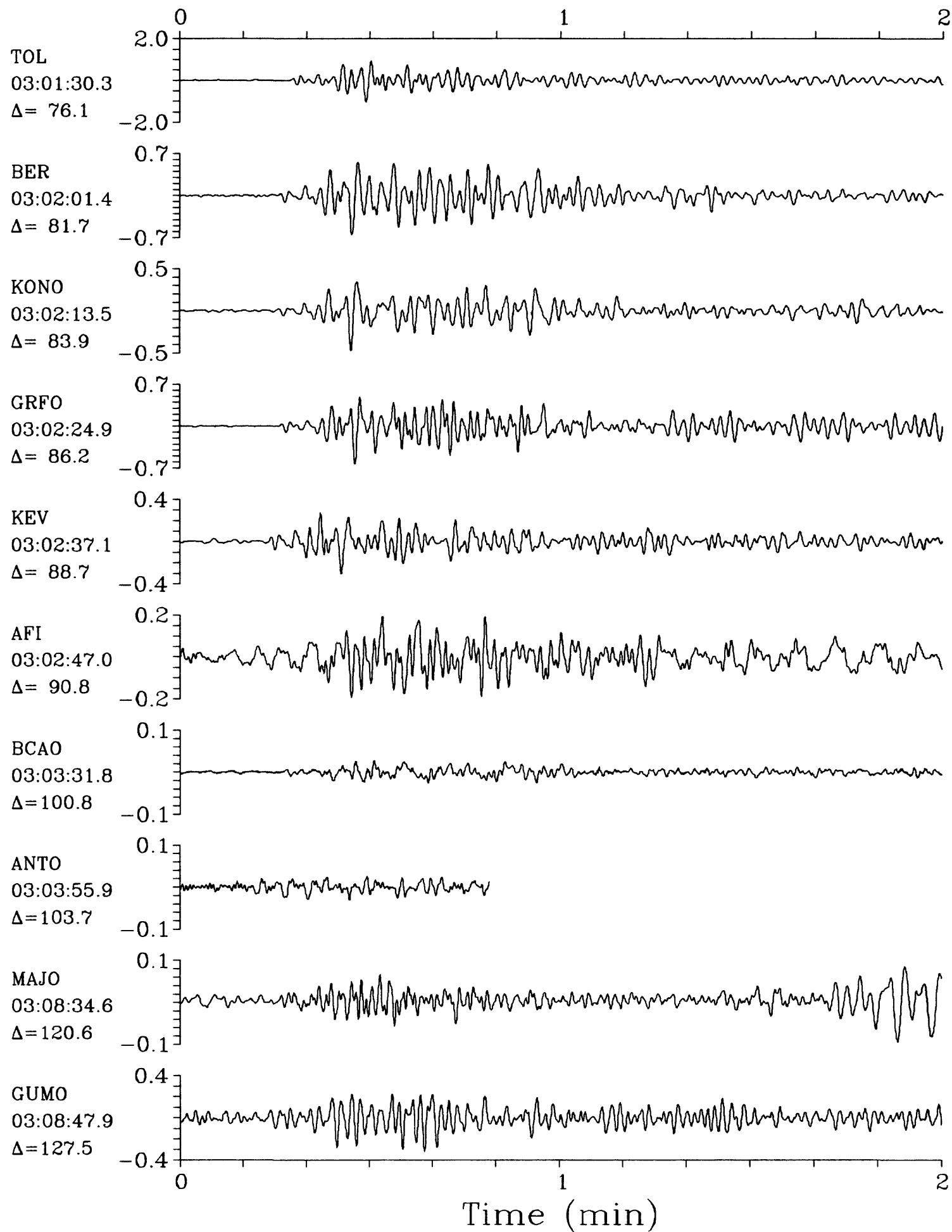
SPZ

03 April 1983 02:50:01.18
Costa Rica h=37.0 MB=6.5 ms=7.3SPZ¹⁰⁹

¹¹⁰SPZ

03 April 1983 02:50:01.18
Costa Rica h=37.0 MB=6.5 ms=7.3

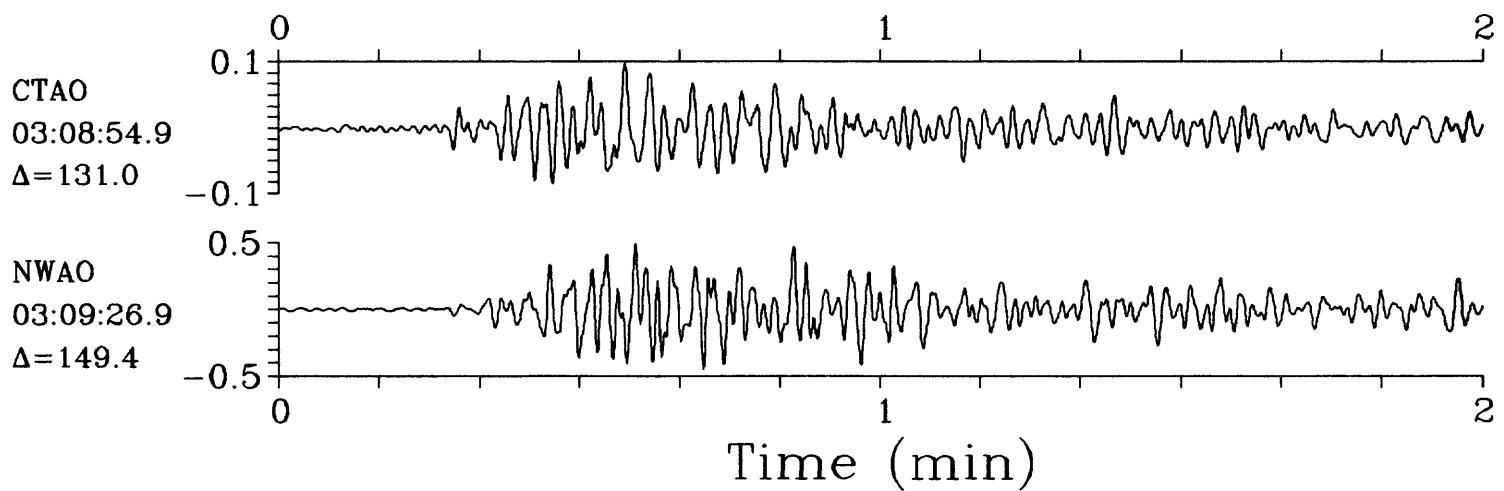
SPZ



SPZ

03 April 1983 02:50:01.18
Costa Rica h=37.0 MB=6.5 ms=7.3

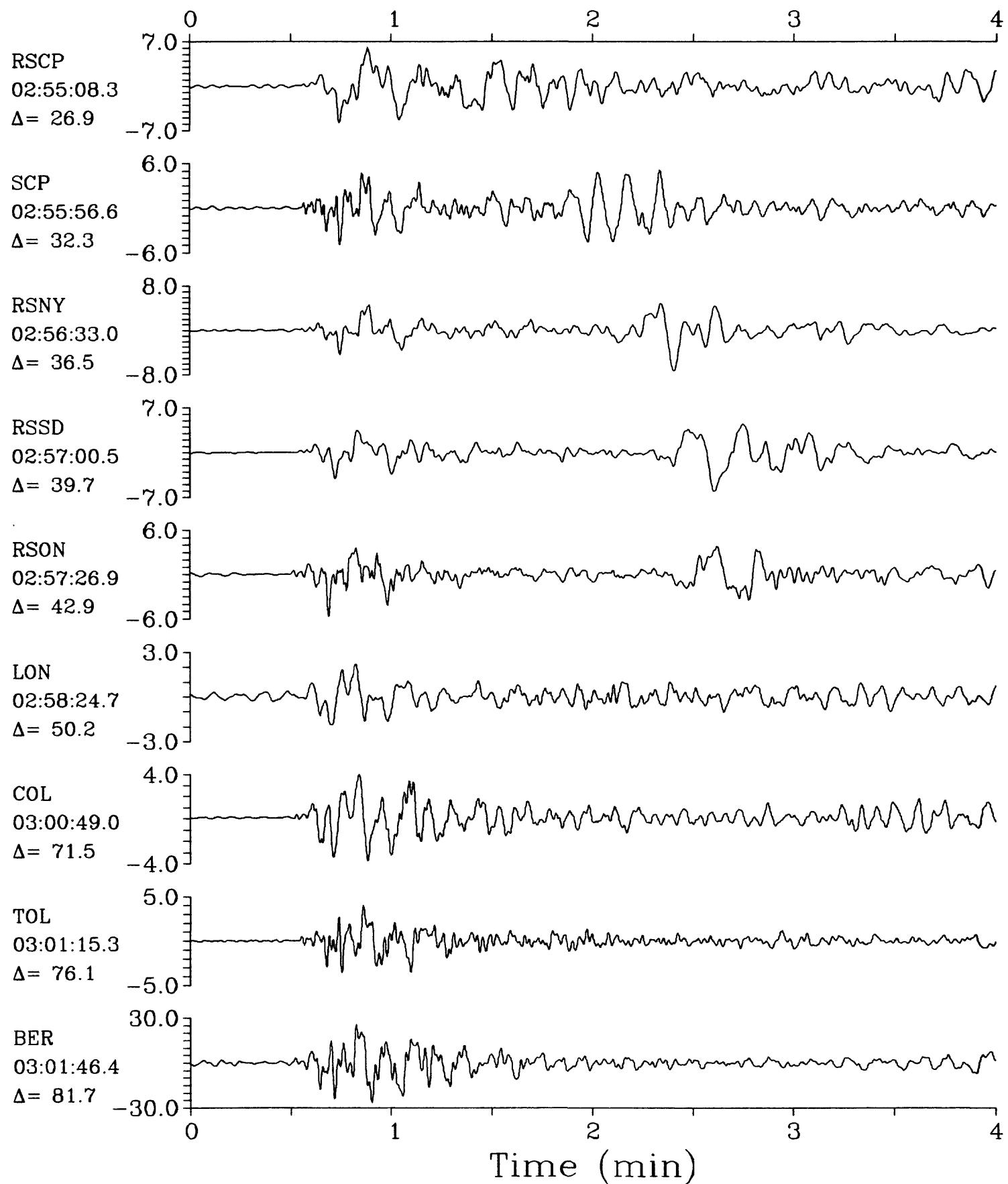
SPZ¹¹¹



112 IPZ

03 April 1983 02:50:01.18
Costa Rica h=37.0 MB=6.5 ms=7.3

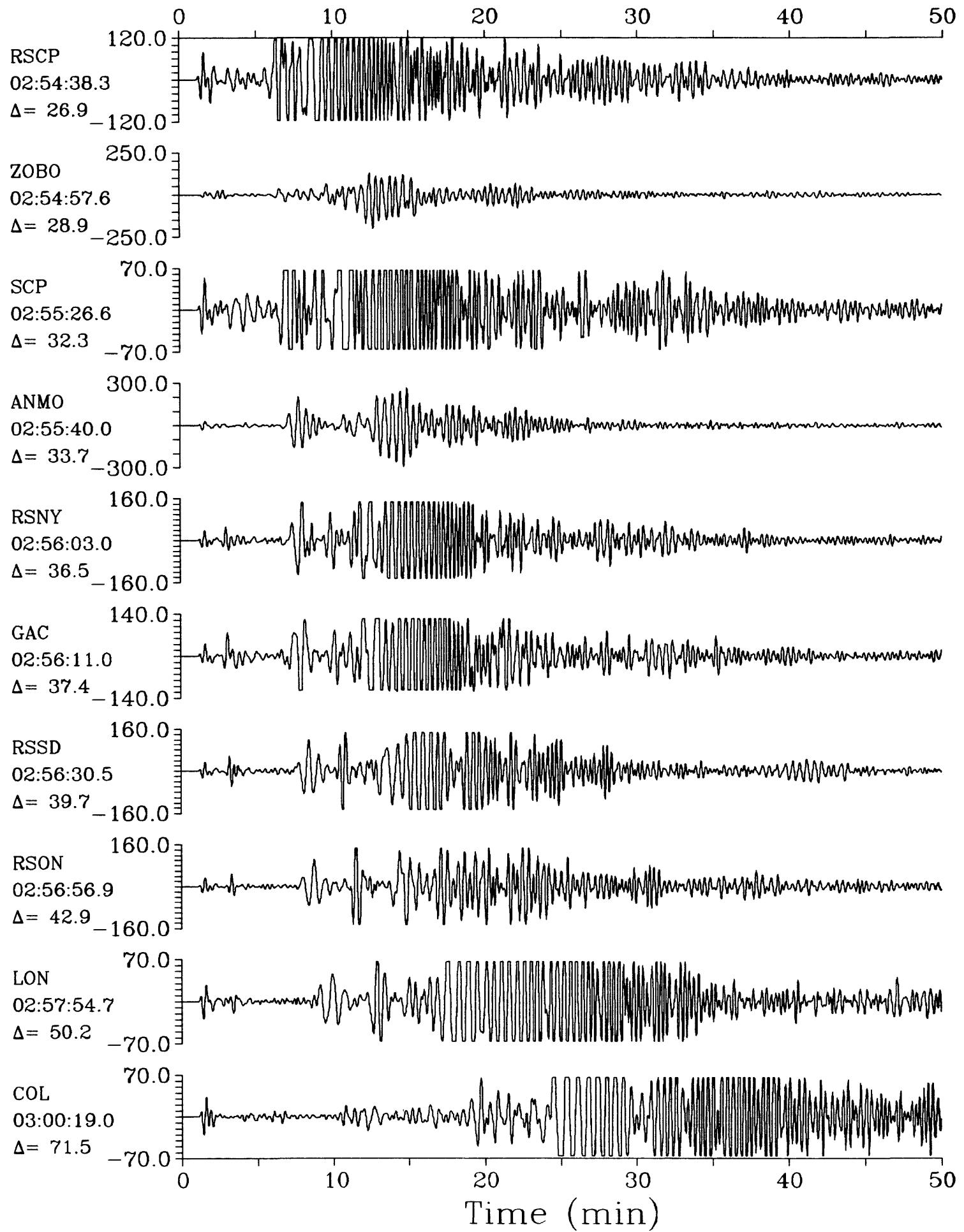
IPZ



LPZ

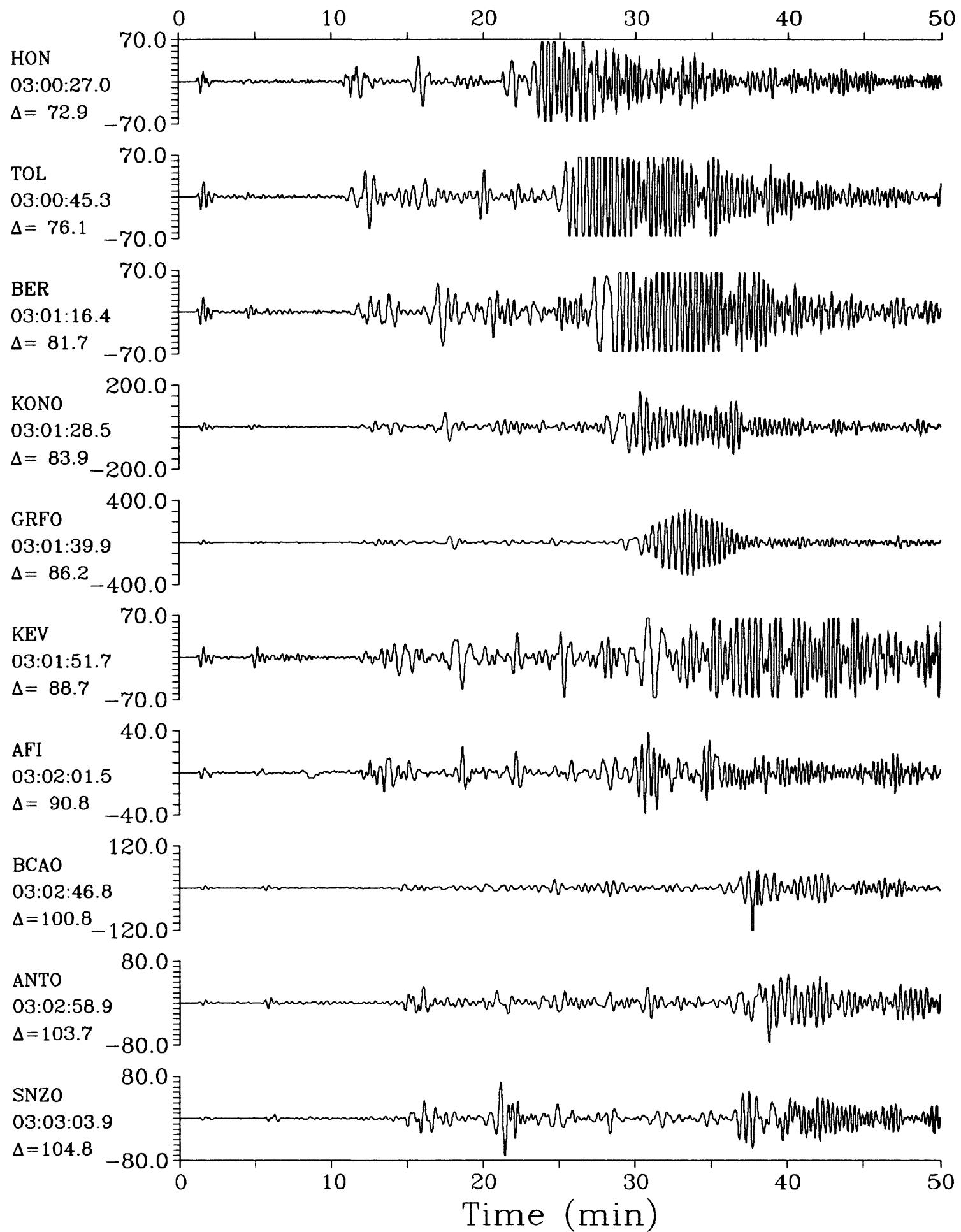
03 April 1983 02:50:01.18
Costa Rica h=37.0 MB=6.5 ms=7.3

LPZ 113

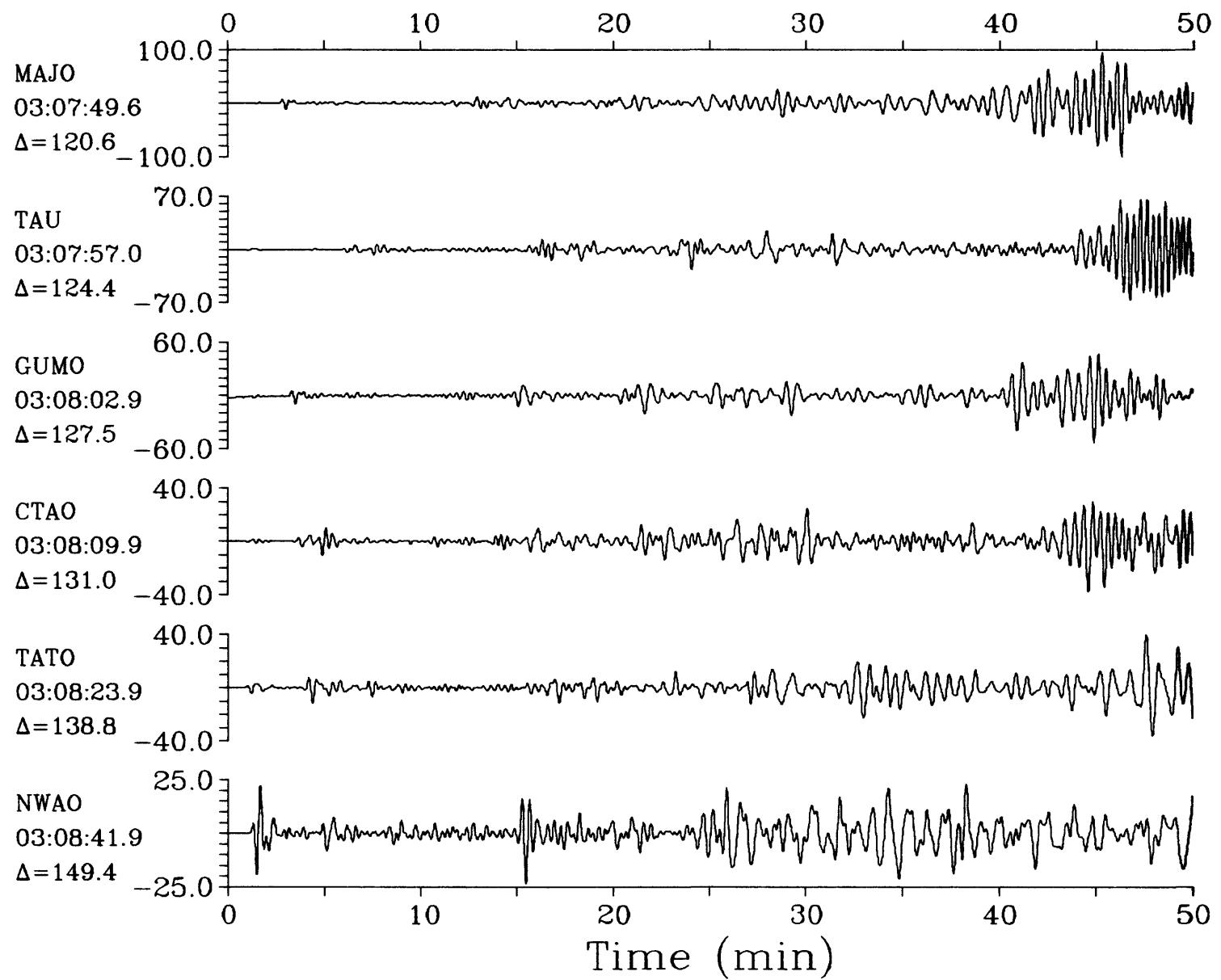


1¹⁴ LPZ03 April 1983 02:50:01.18
Costa Rica h=37.0 MB=6.5 ms=7.3

LPZ

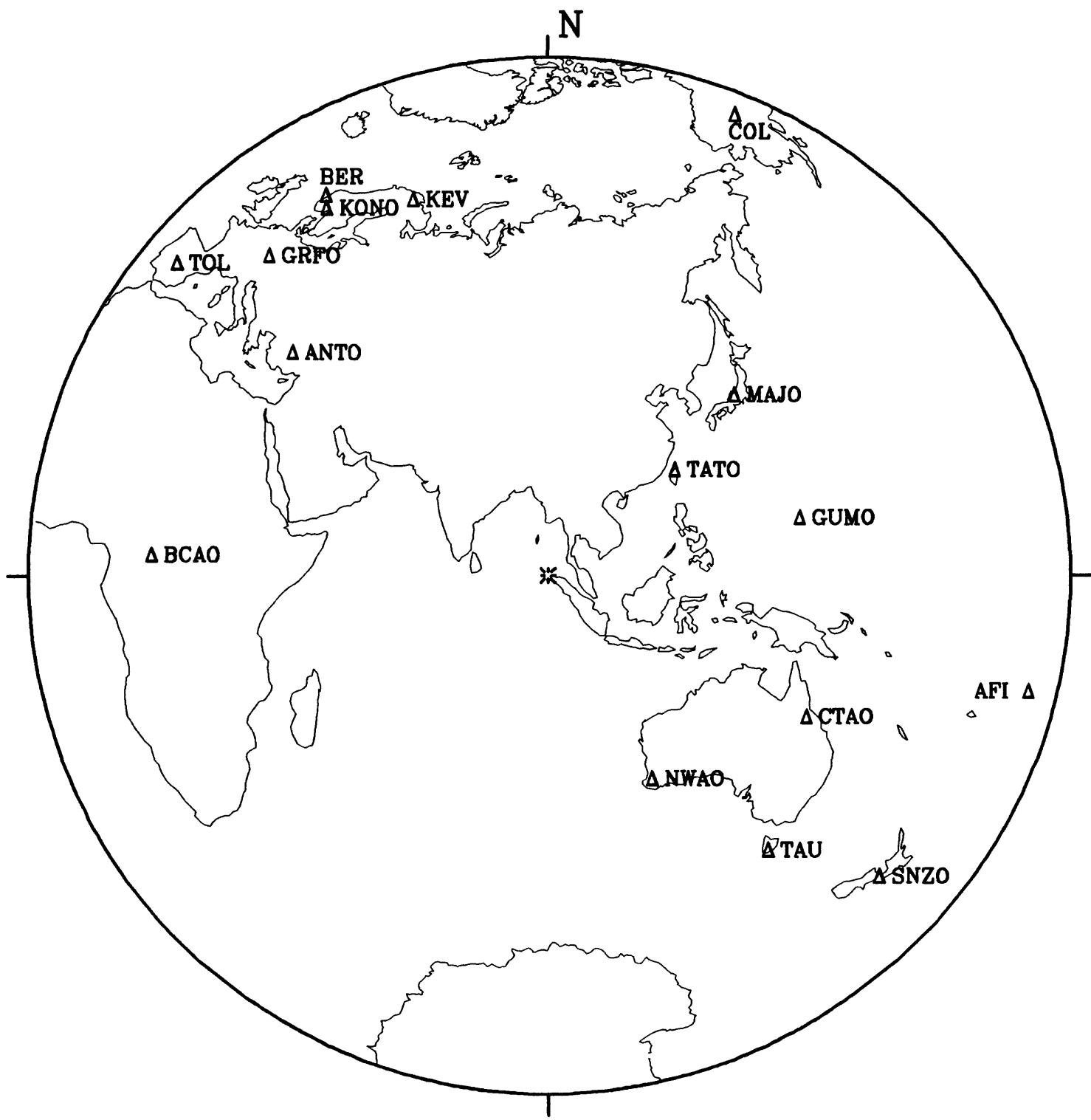


LPZ

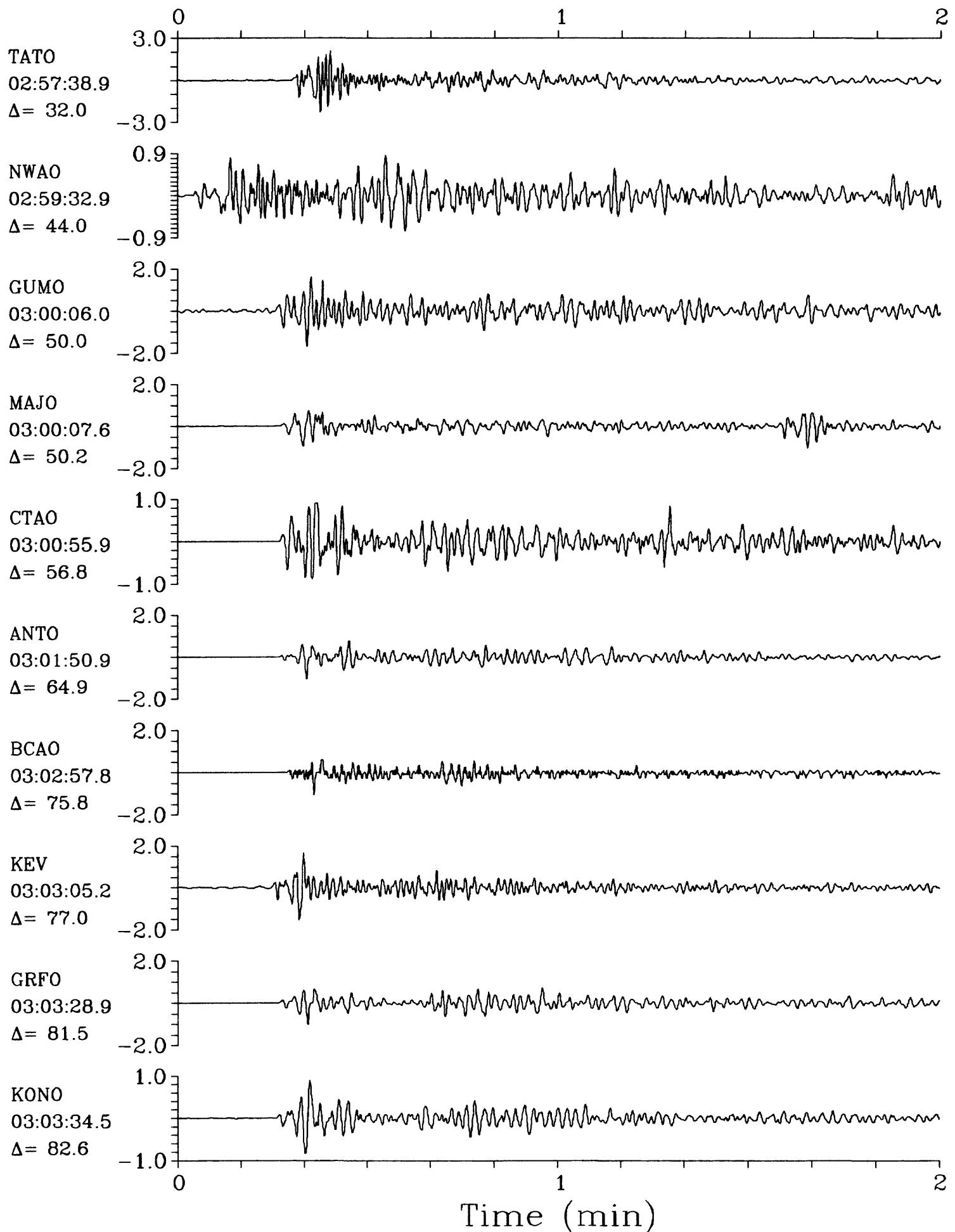
03 April 1983 02:50:01.18
Costa Rica h=37.0 MB=6.5 ms=7.3LPZ¹¹⁵

04 April 1983 02:51:34.36

Northern Sumatera



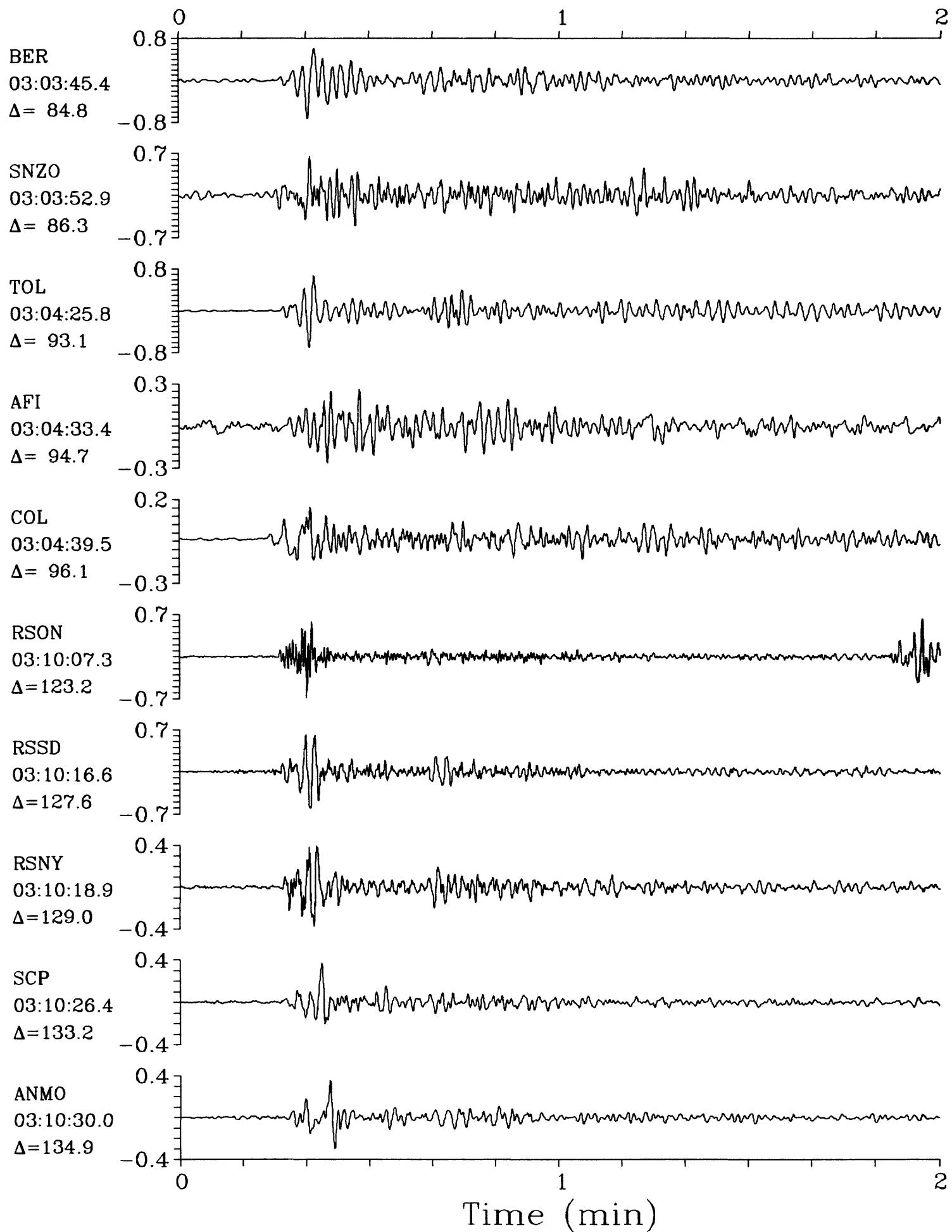
SPZ

04 April 1983 02:51:34.36
Northern Sumatera h=78.5 MB=6.6SPZ¹¹⁷

¹¹⁸SPZ

04 April 1983 02:51:34.36
Northern Sumatera h=78.5 MB=6.6

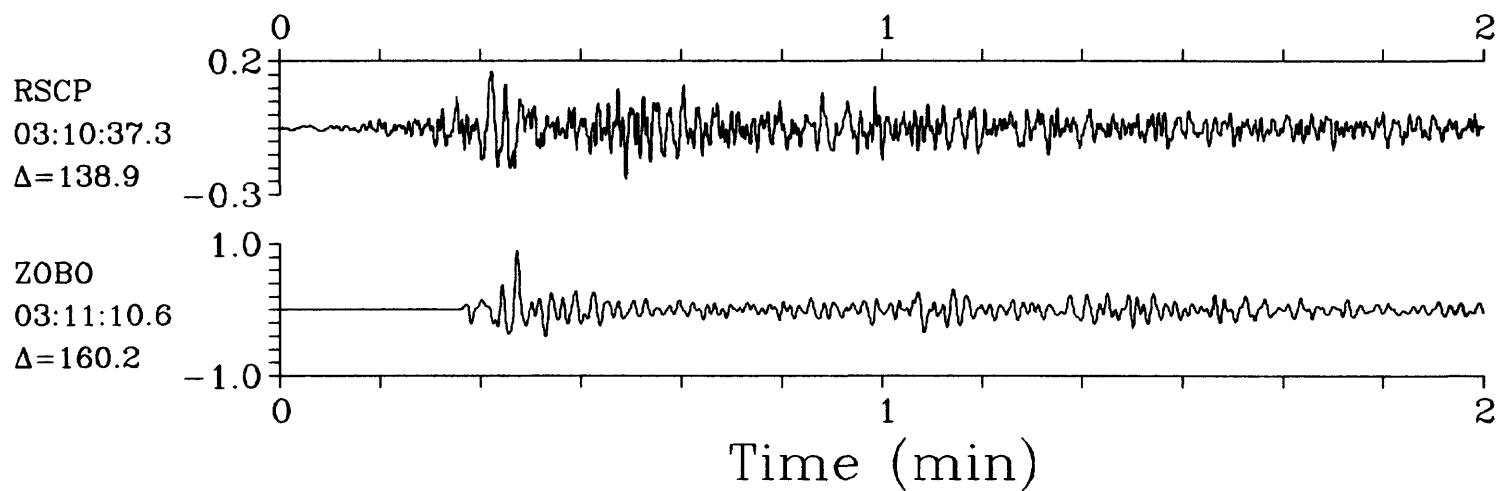
SPZ



SPZ

04 April 1983 02:51:34.36
Northern Sumatera h=78.5 MB=6.6

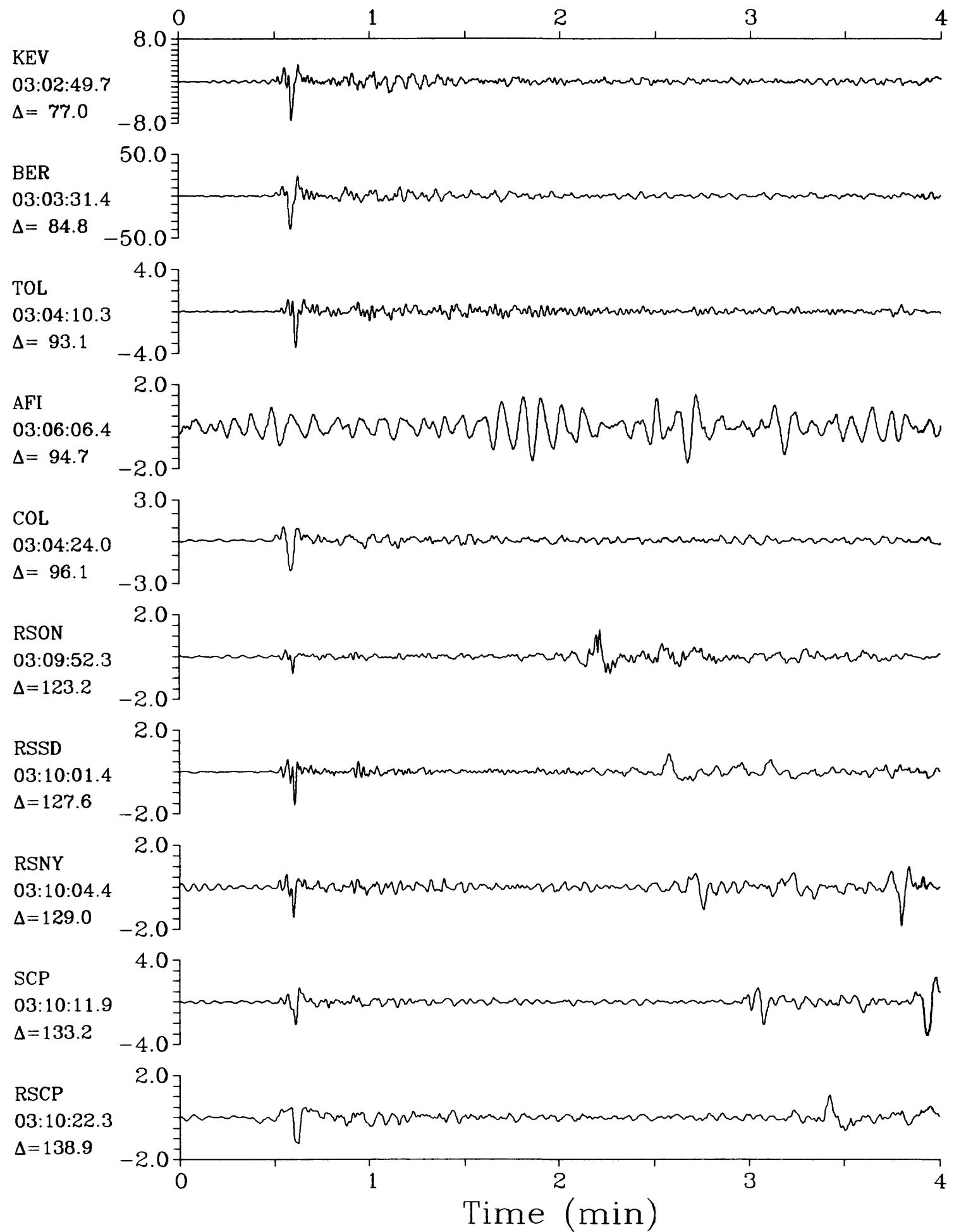
SPZ¹¹⁹



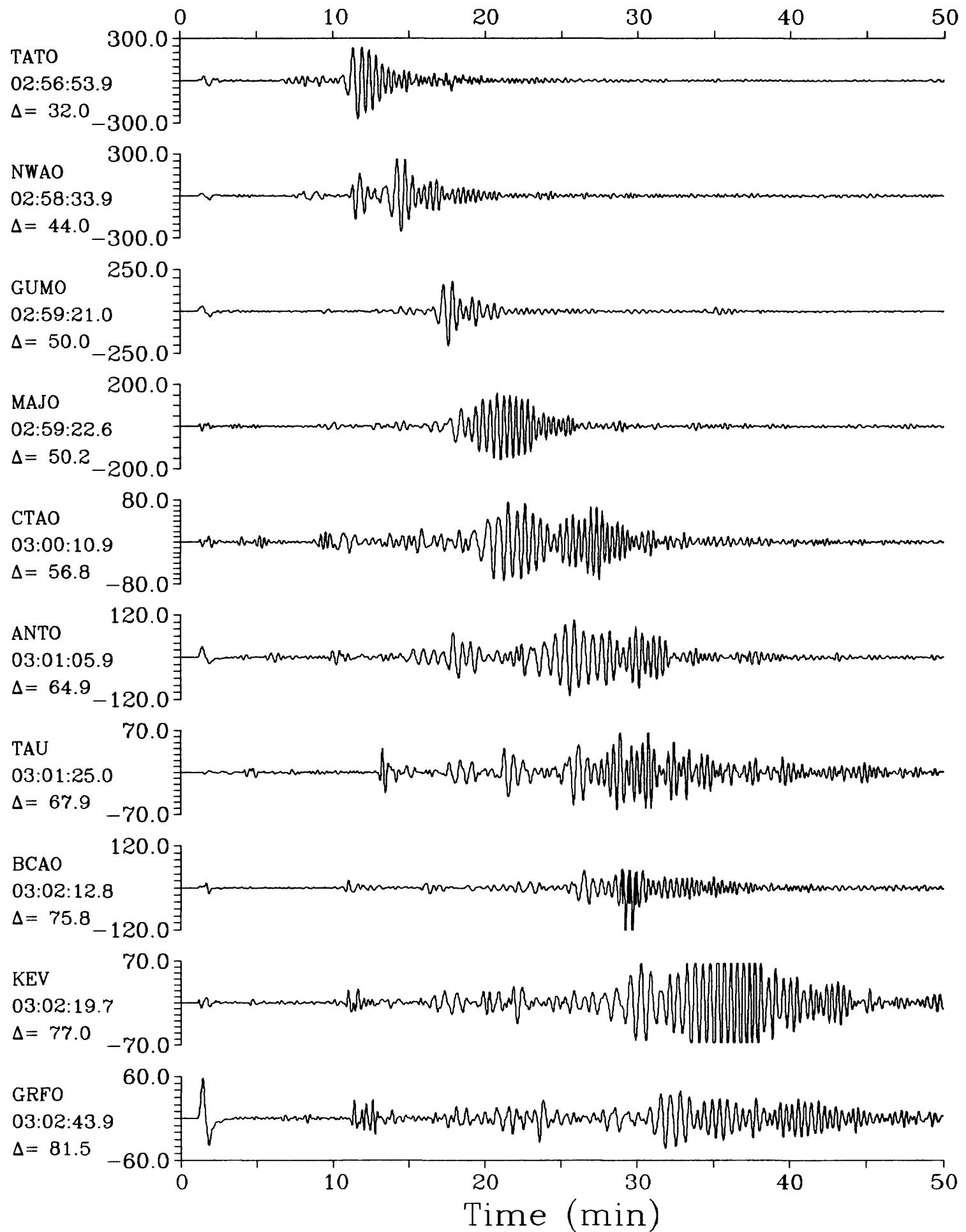
120 IPZ

04 April 1983 02:51:34.36
Northern Sumatera h=78.5 MB=6.6

IPZ



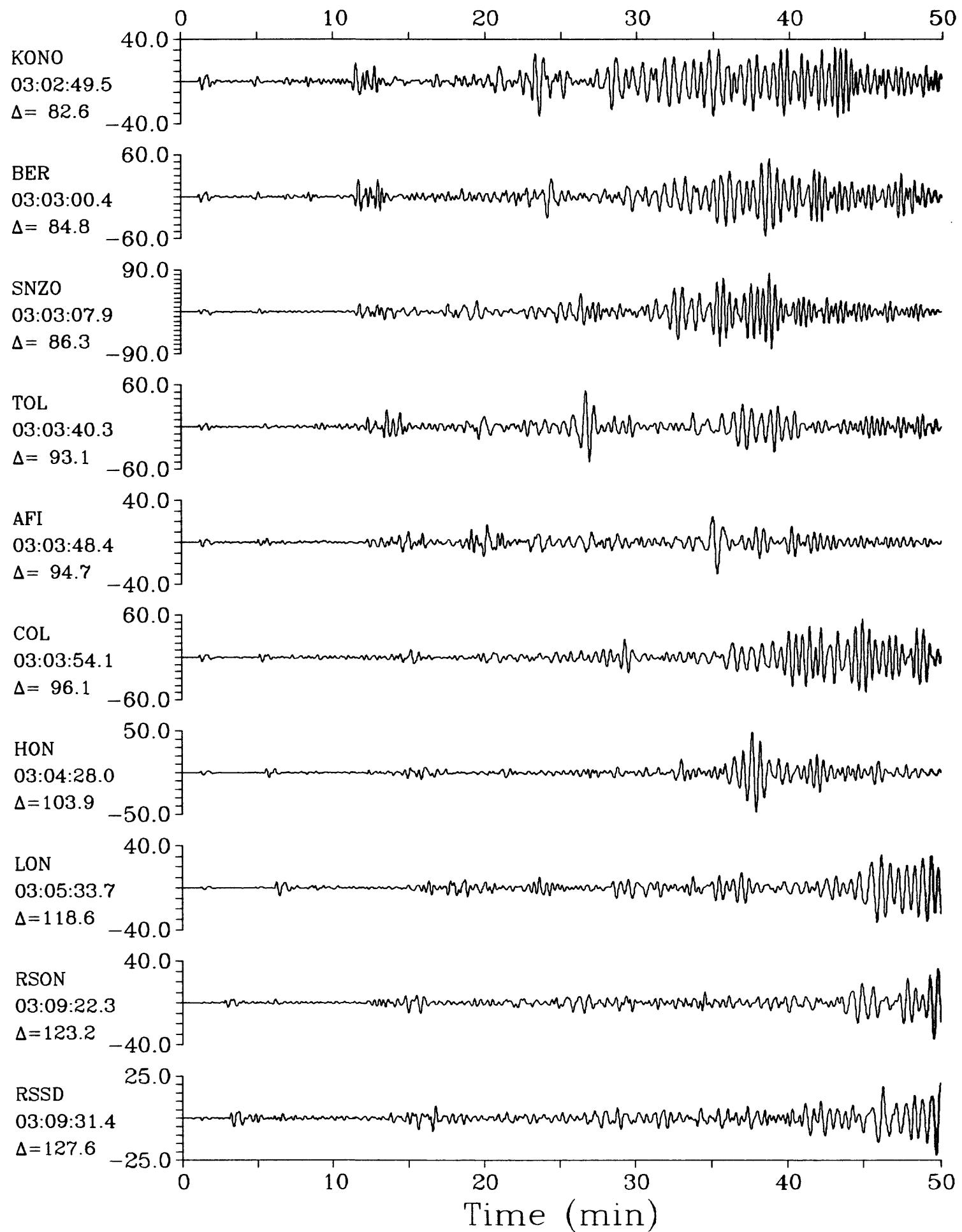
LPZ

04 April 1983 02:51:34.36
Northern Sumatera h=78.5 MB=6.6LPZ¹²¹

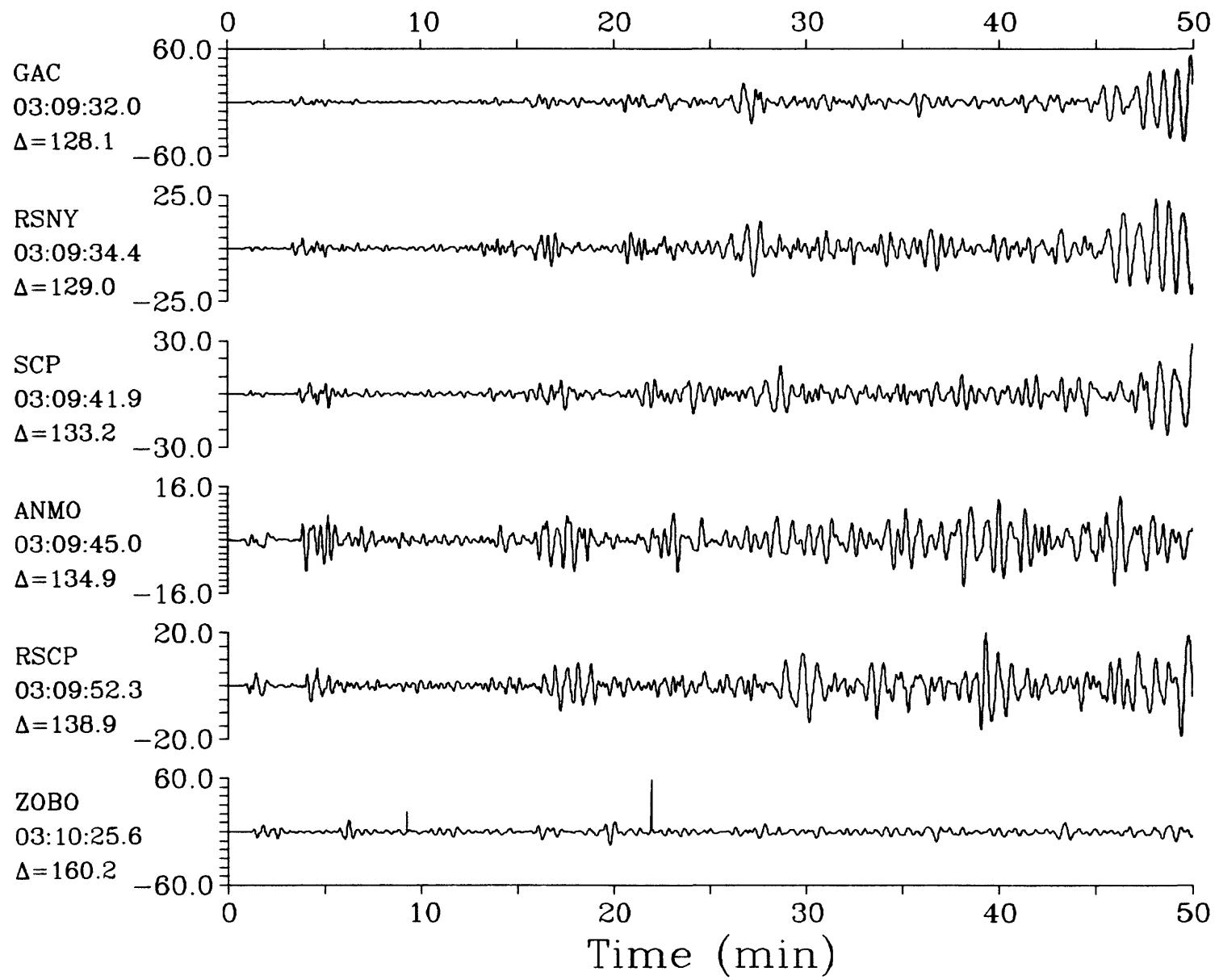
122°LPZ

04 April 1983 02:51:34.36
Northern Sumatera h=78.5 MB=6.6

LPZ

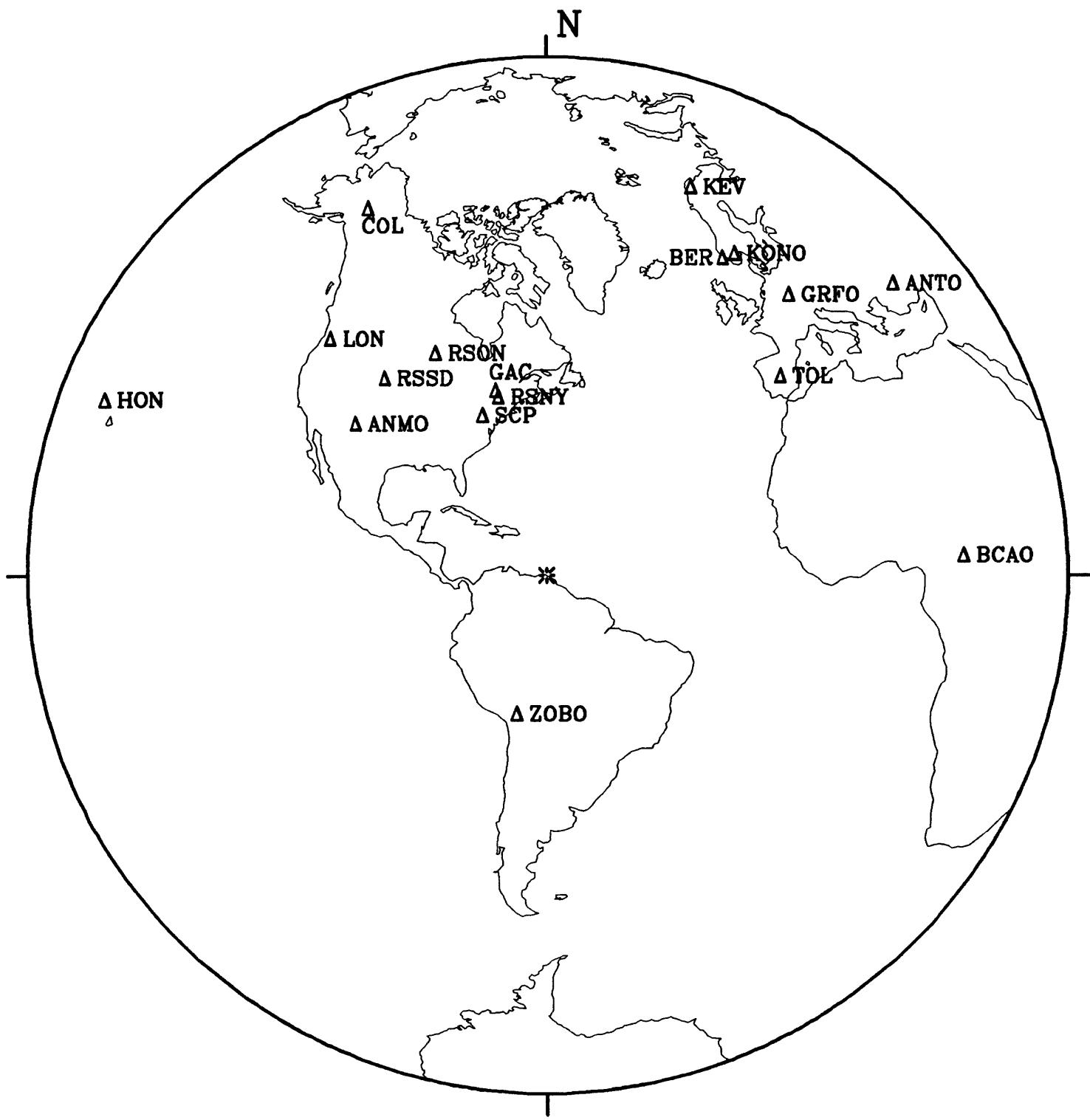


LPZ

04 April 1983 02:51:34.36
Northern Sumatera h=78.5 MB=6.6LPZ ¹²³

11 April 1983 08:18:10.12

Near Coast of Venezuela

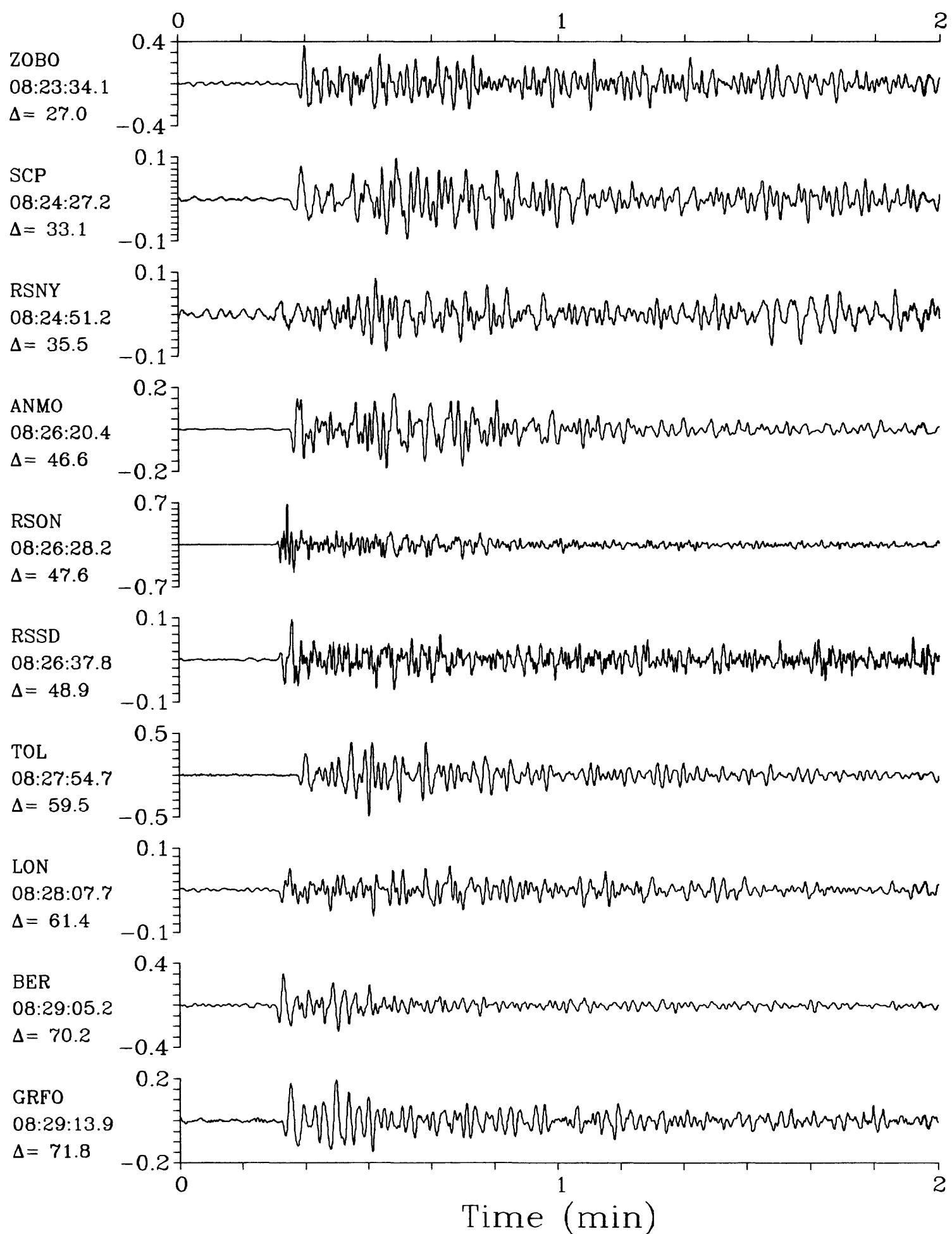


SPZ

11 April 1983 08:18:10.12

SPZ¹²⁵

Near Coast of Venezuela h=40.0 MB=6.0 ms=5.9

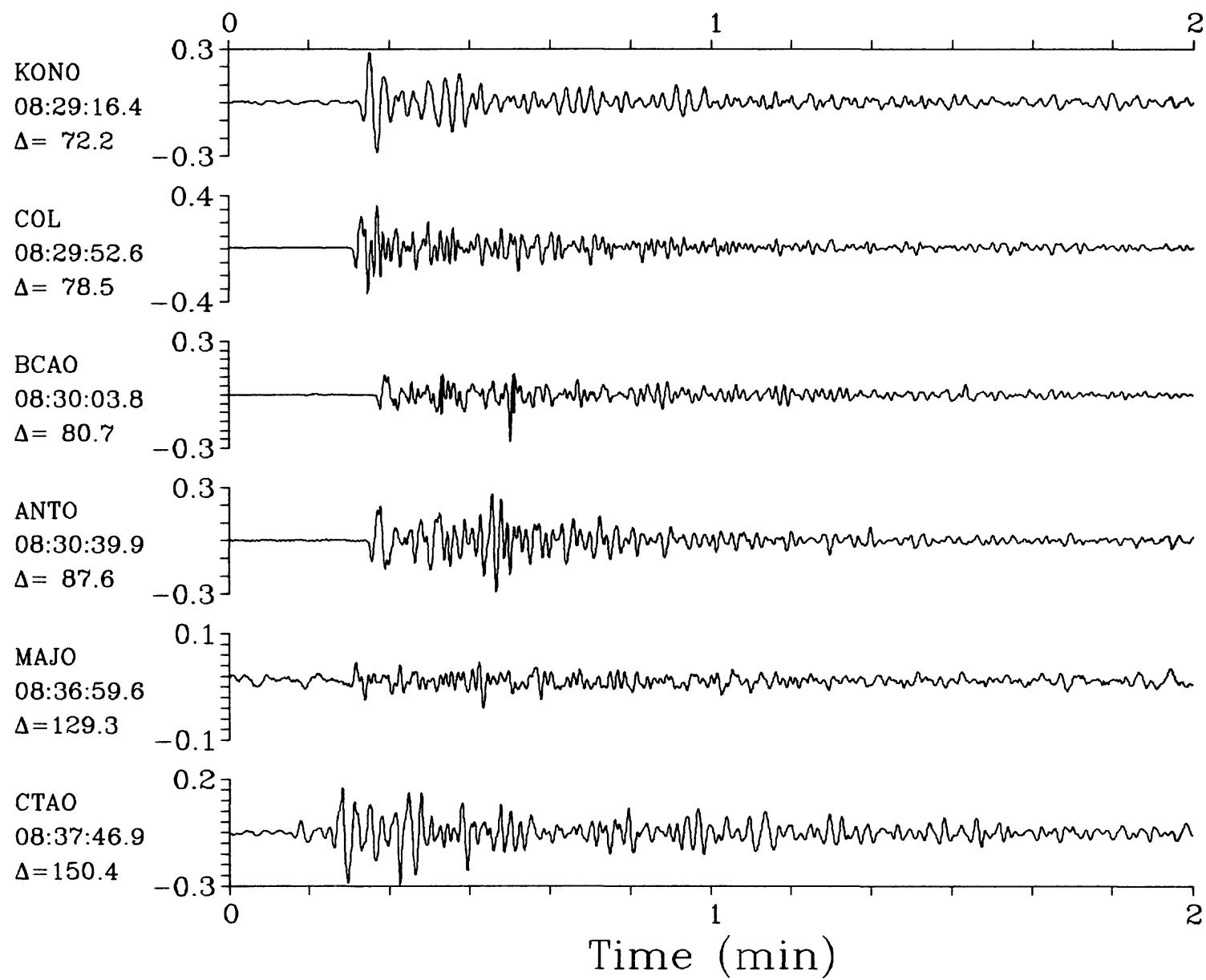


¹²⁶ SPZ

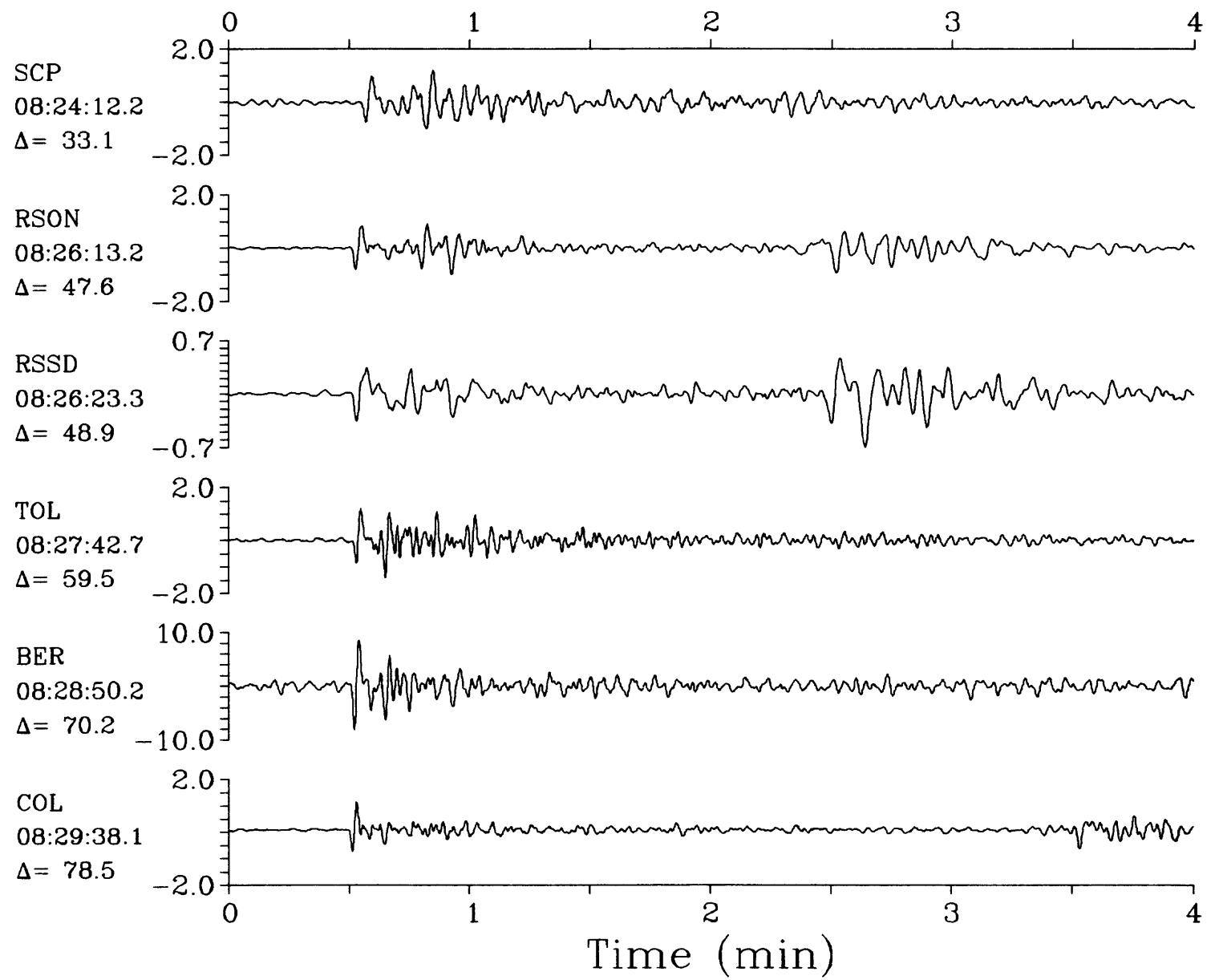
11 April 1983 08:18:10.12

SPZ

Near Coast of Venezuela h=40.0 MB=6.0 ms=5.9



IPZ

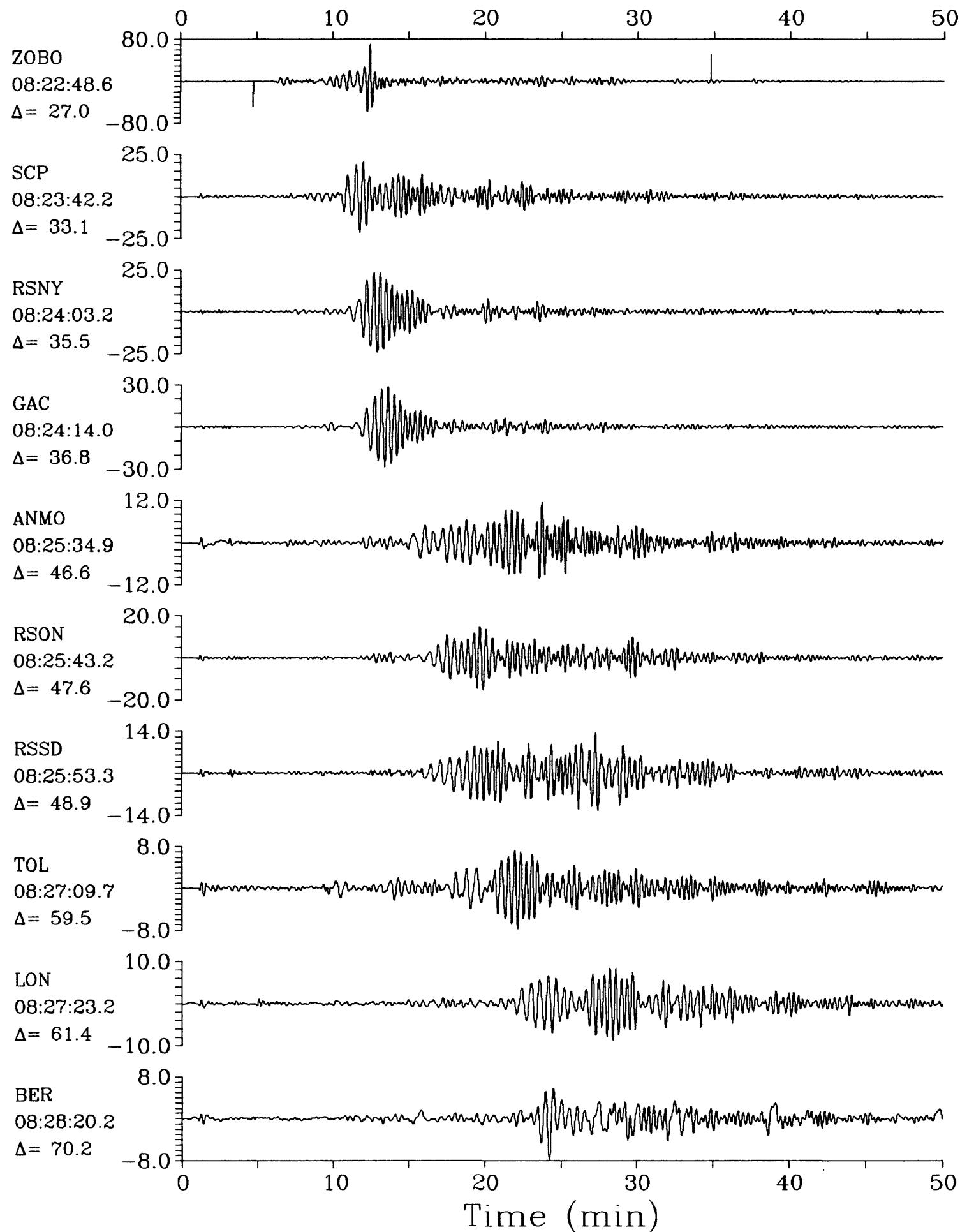
11 April 1983 08:18:10.12
Near Coast of Venezuela h=40.0 MB=6.0 ms=5.9IPZ¹²⁷

128 LPZ

11 April 1983 08:18:10.12

LPZ

Near Coast of Venezuela h=40.0 MB=6.0 ms=5.9

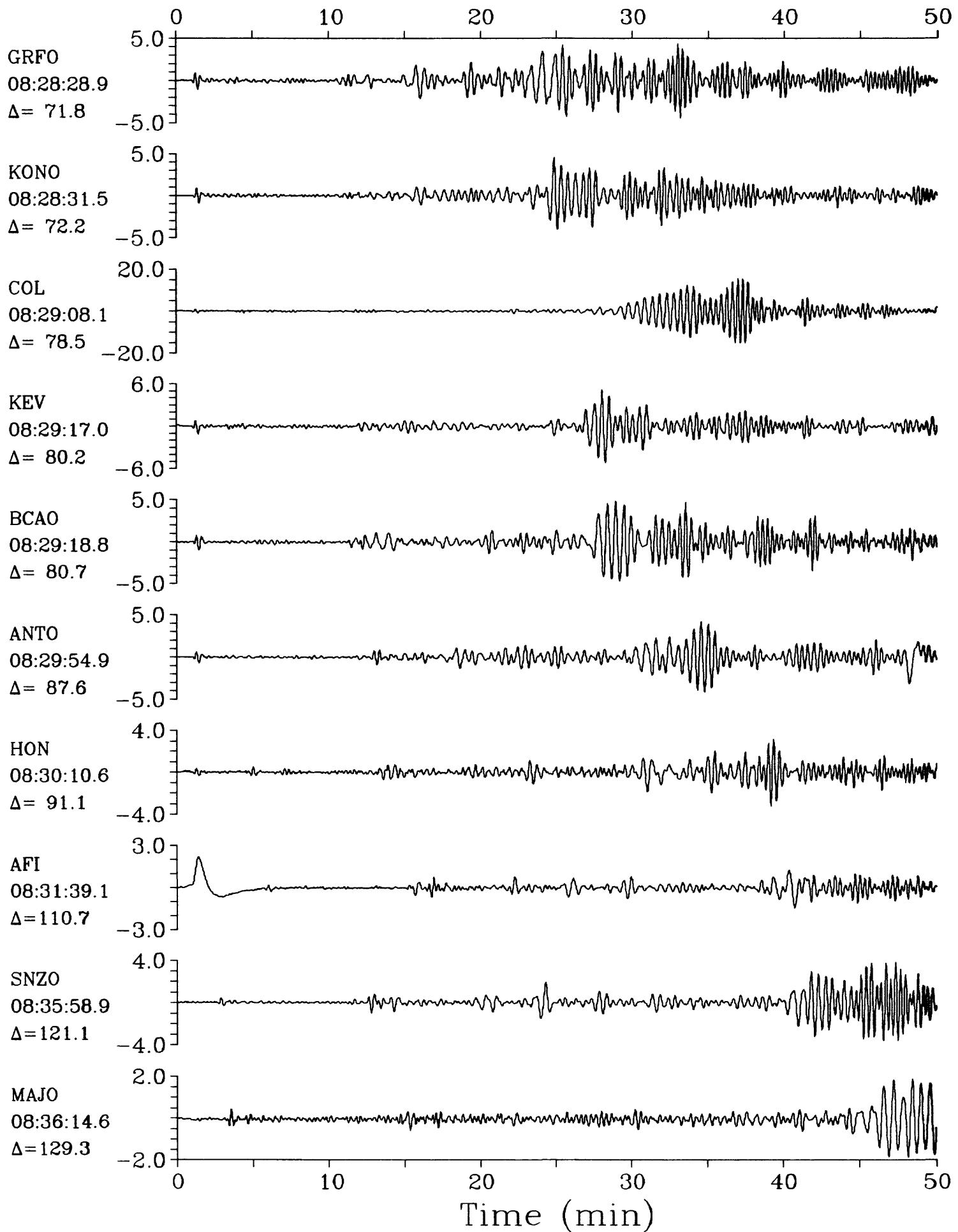


LPZ

11 April 1983 08:18:10.12

LPZ ¹²⁹

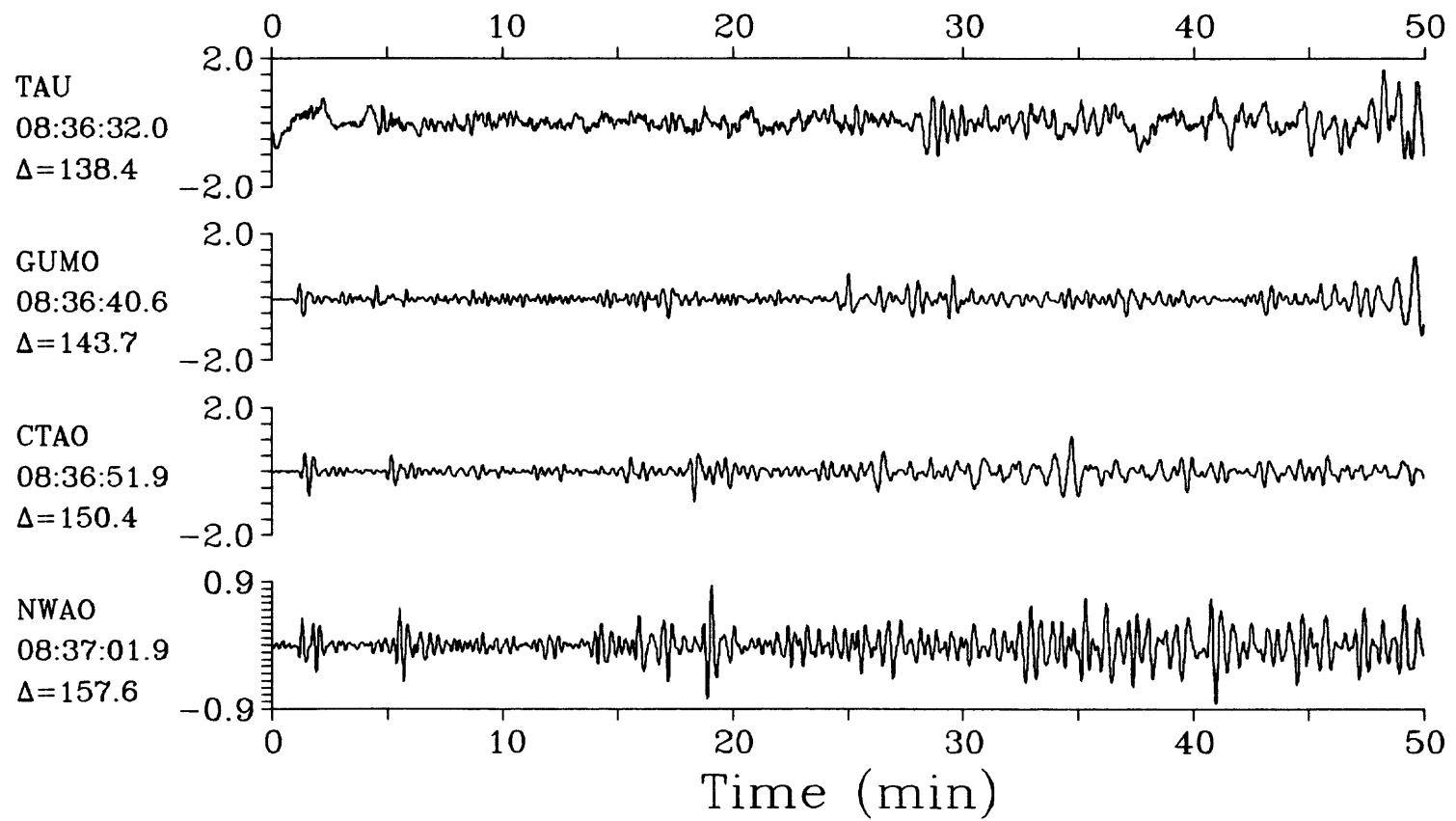
Near Coast of Venezuela h=40.0 MB=6.0 ms=5.9



¹³⁰ LPZ

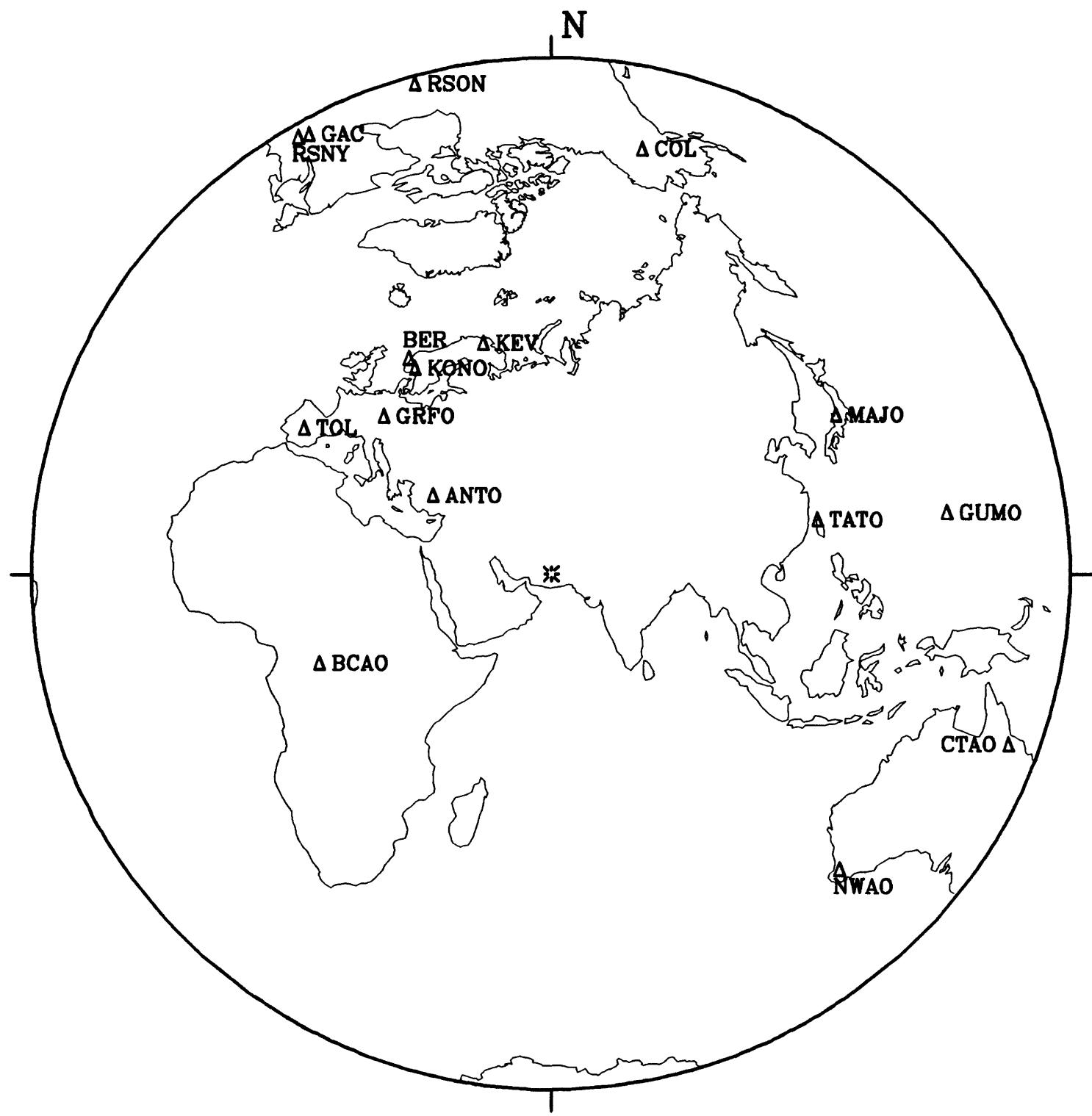
11 April 1983 08:18:10.12
Near Coast of Venezuela h=40.0 MB=6.0 ms=5.9

LPZ



18 April 1983 10:58:51.26

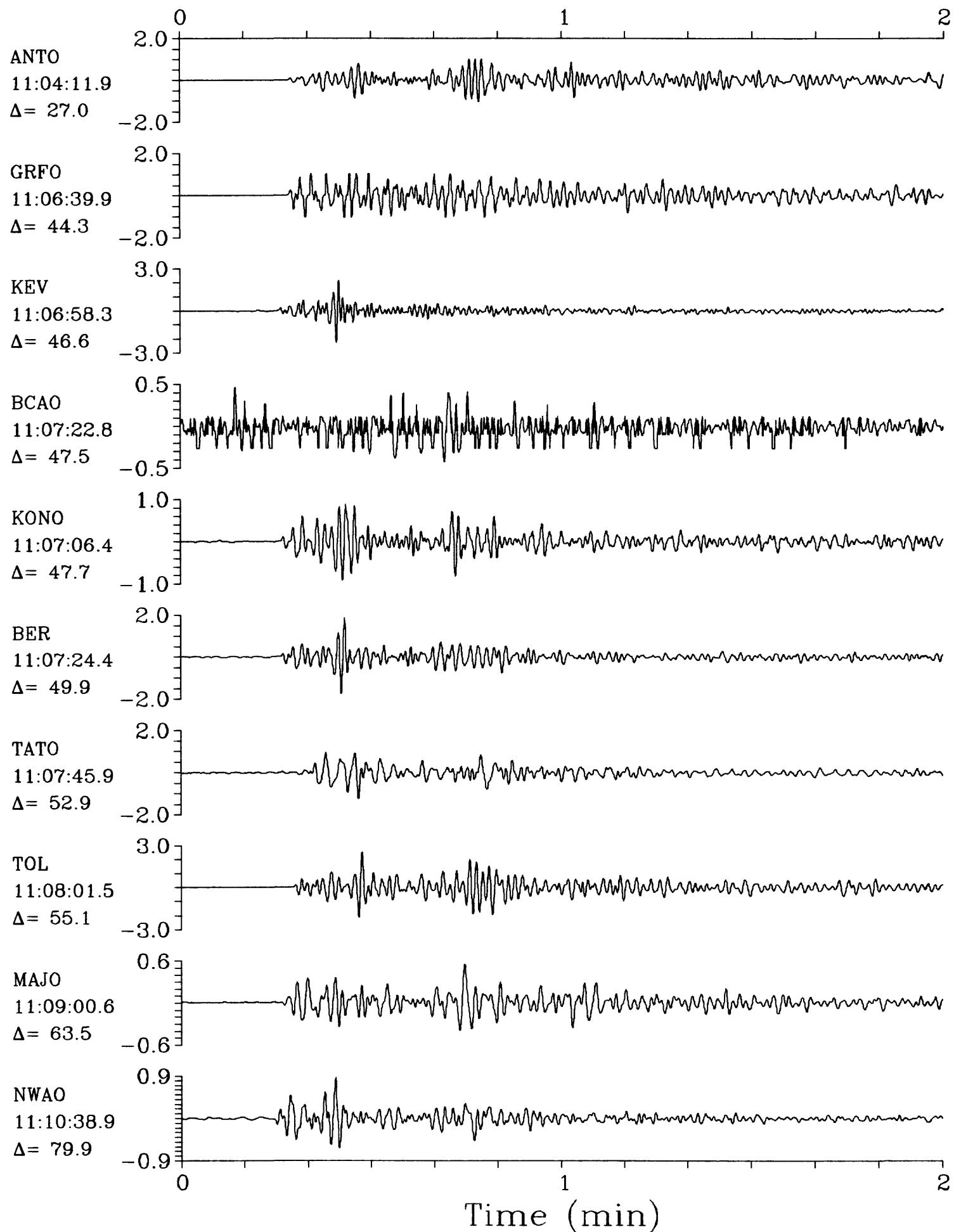
Southern Iran



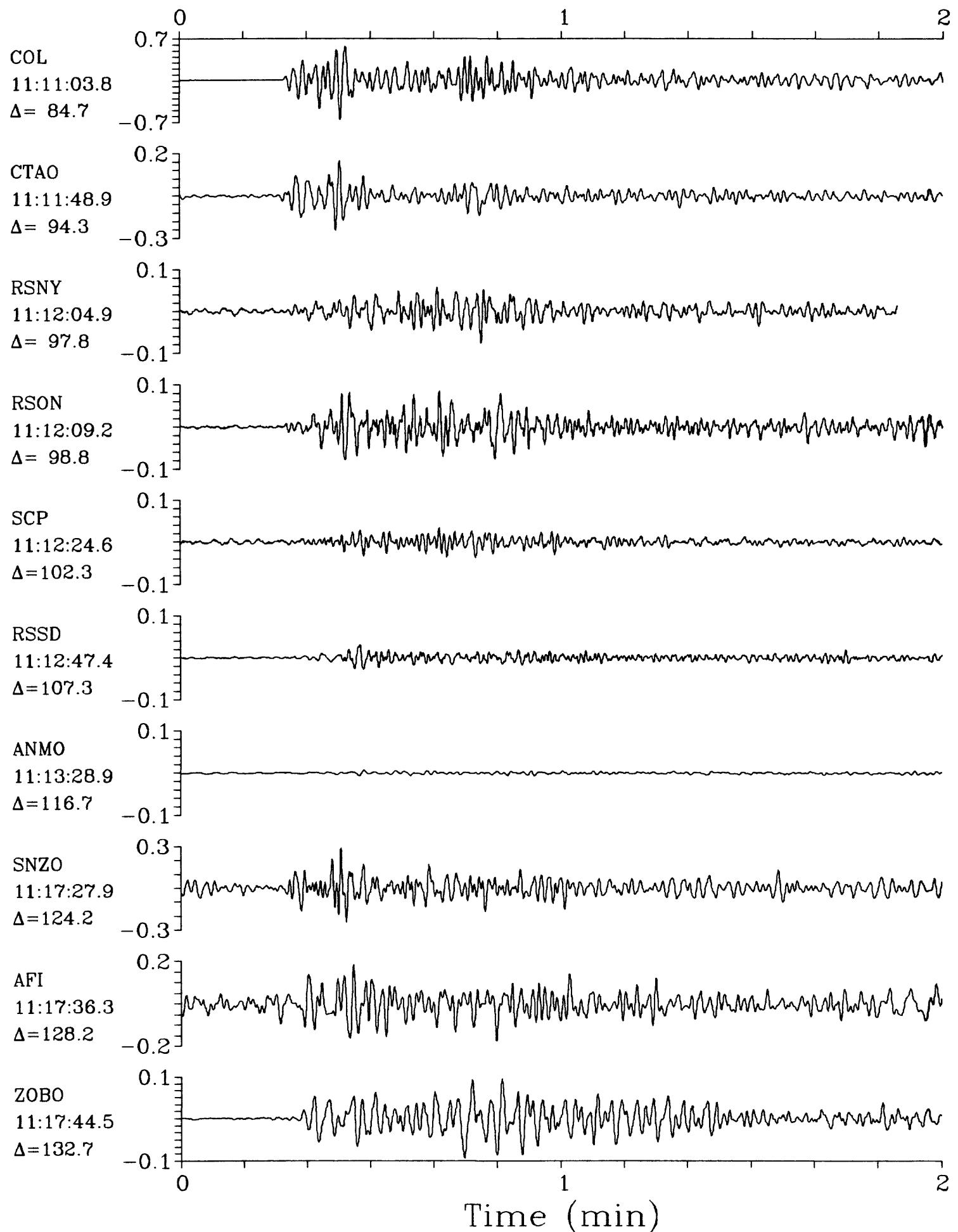
132 SPZ

18 April 1983 10:58:51.26
Southern Iran h=64.0 MB=6.5

SPZ



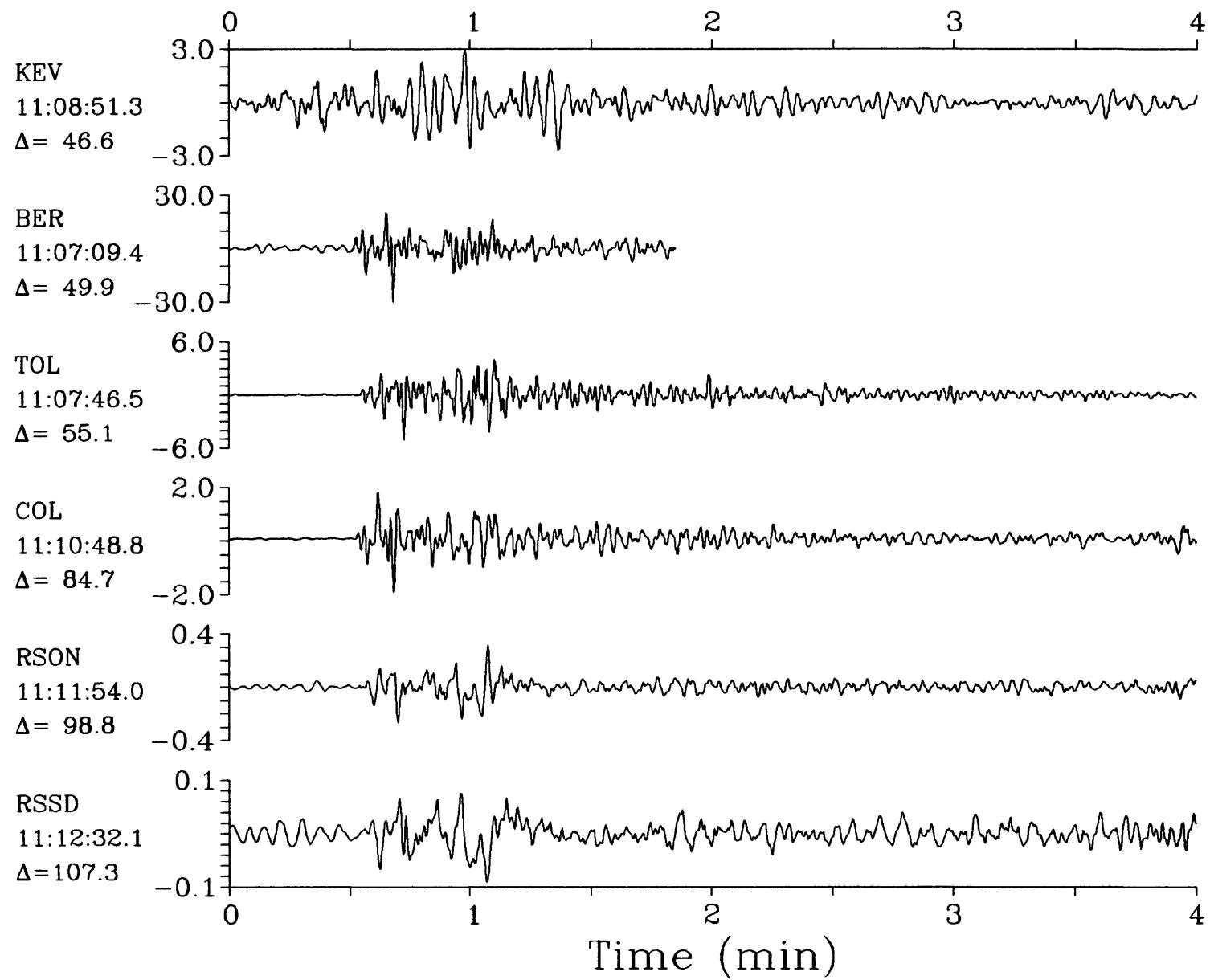
SPZ

18 April 1983 10:58:51.26
Southern Iran h=64.0 MB=6.5SPZ¹³³

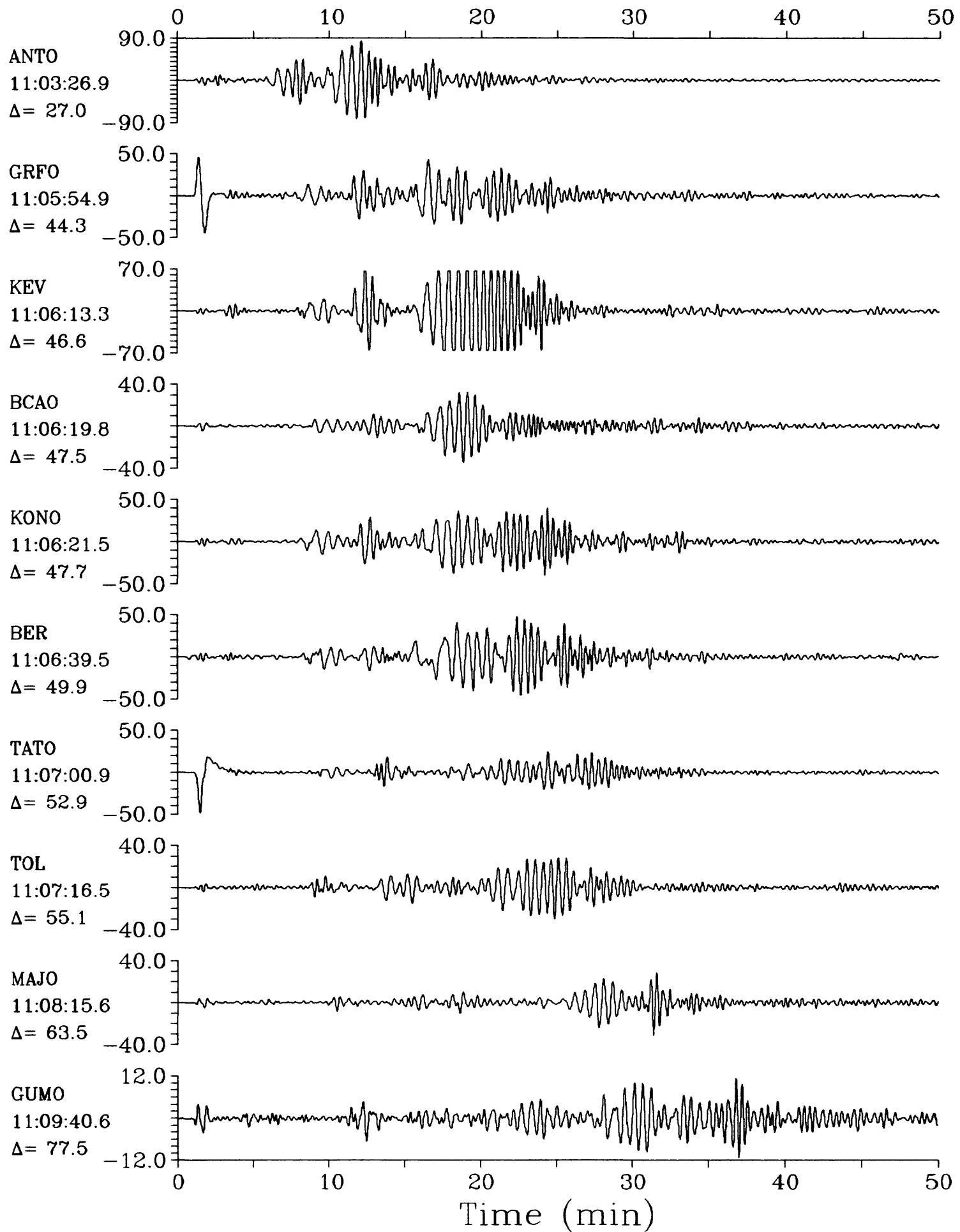
¹³⁴ IPZ

18 April 1983 10:58:51.26
Southern Iran h=64.0 MB=6.5

IPZ

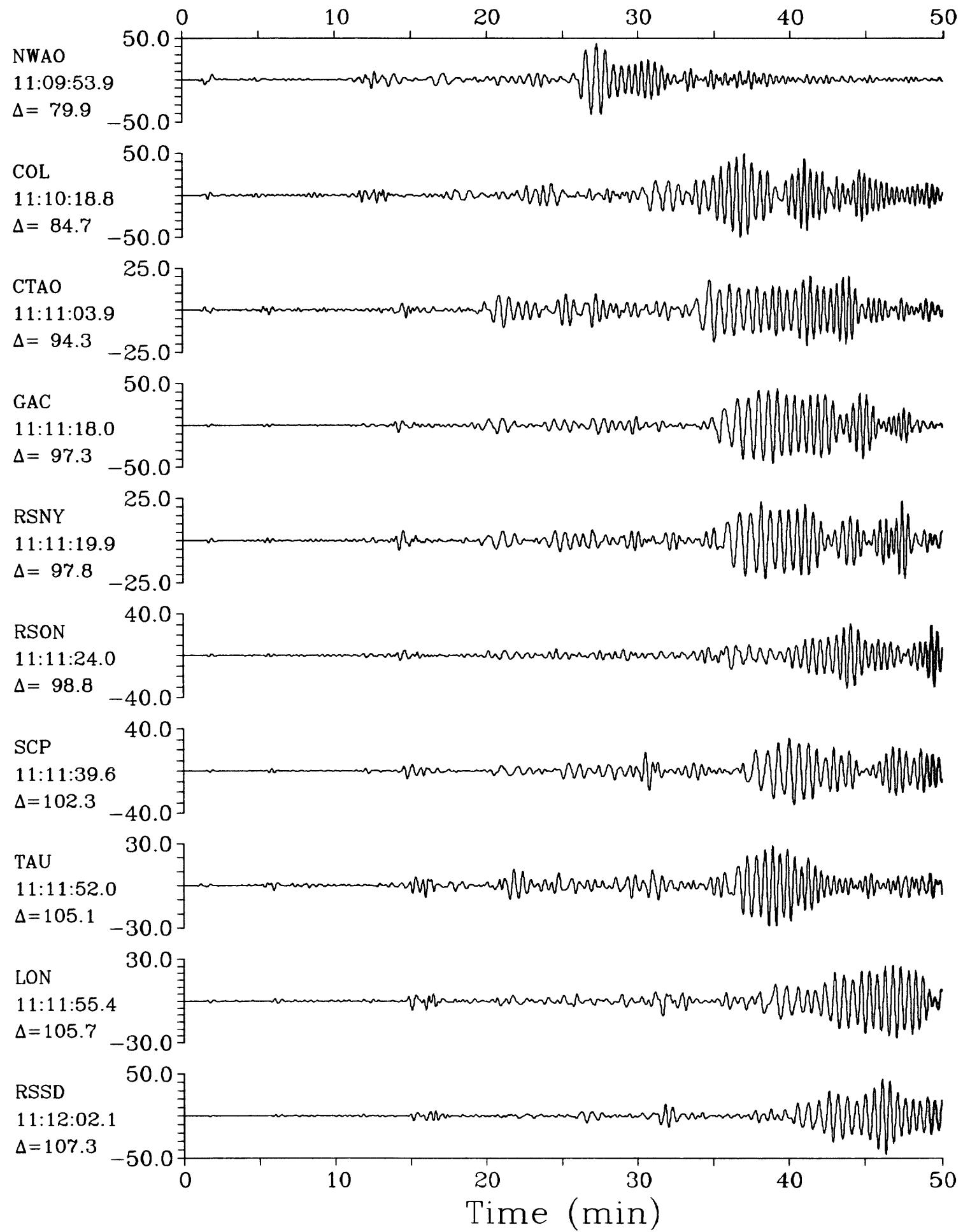


LPZ

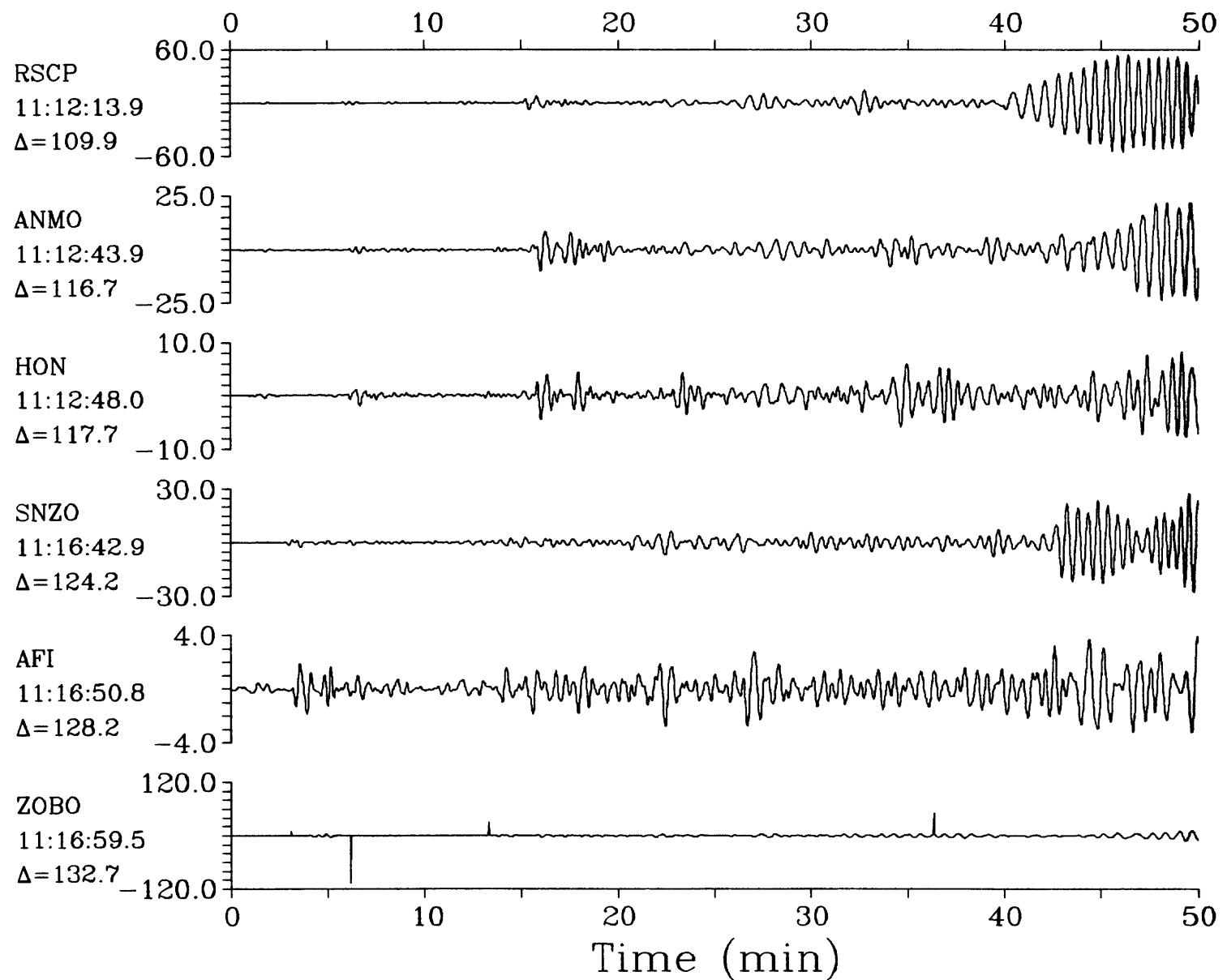
18 April 1983 10:58:51.26
Southern Iran h=64.0 MB=6.5LPZ ¹³⁵

¹³⁶LPZ18 April 1983 10:58:51.26
Southern Iran h=64.0 MB=6.5

LPZ

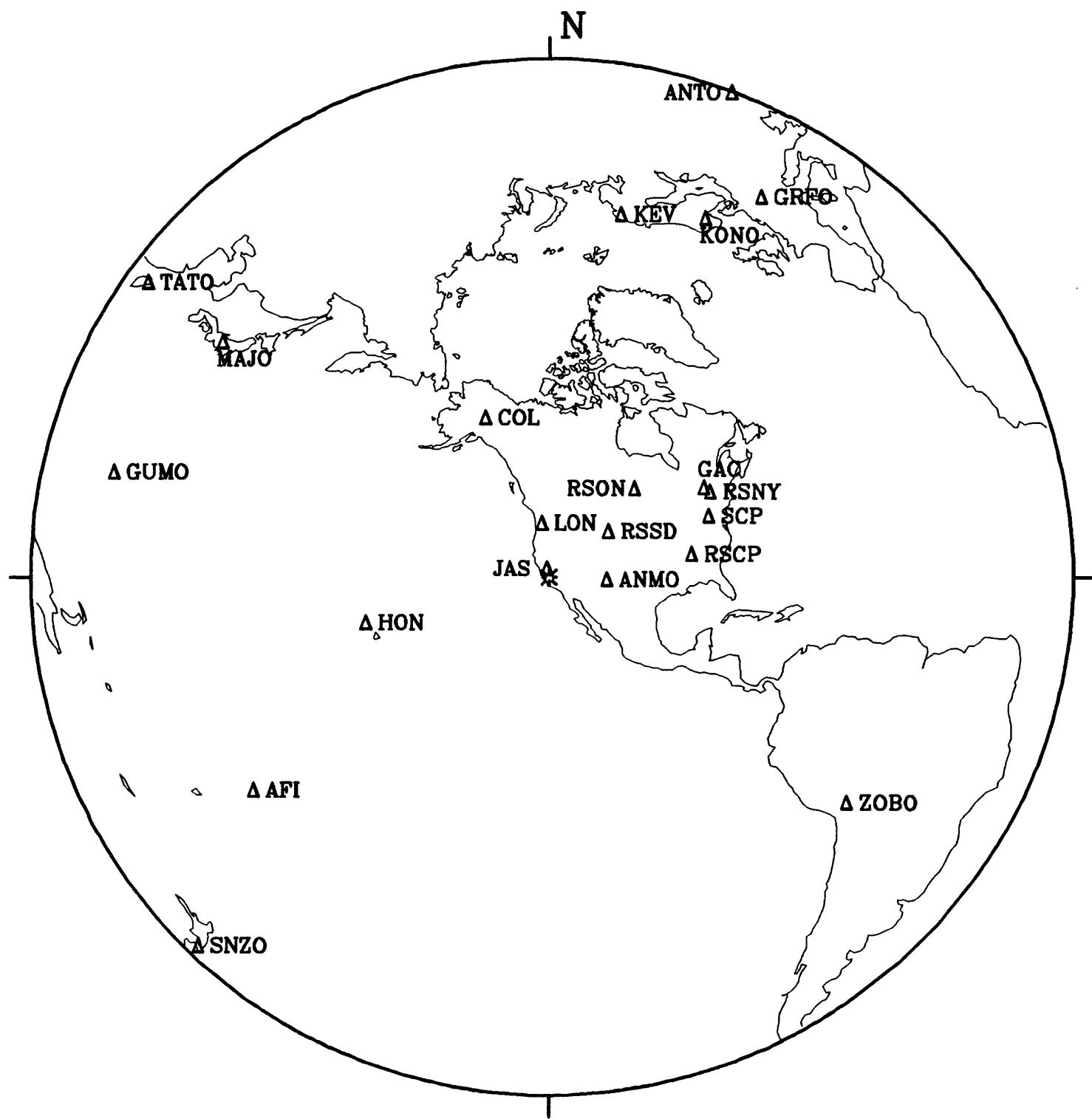


LPZ

18 April 1983 10:58:51.26
Southern Iran h=64.0 MB=6.5LPZ ¹³⁷

02 May 1983 23:42:37.76

Central California

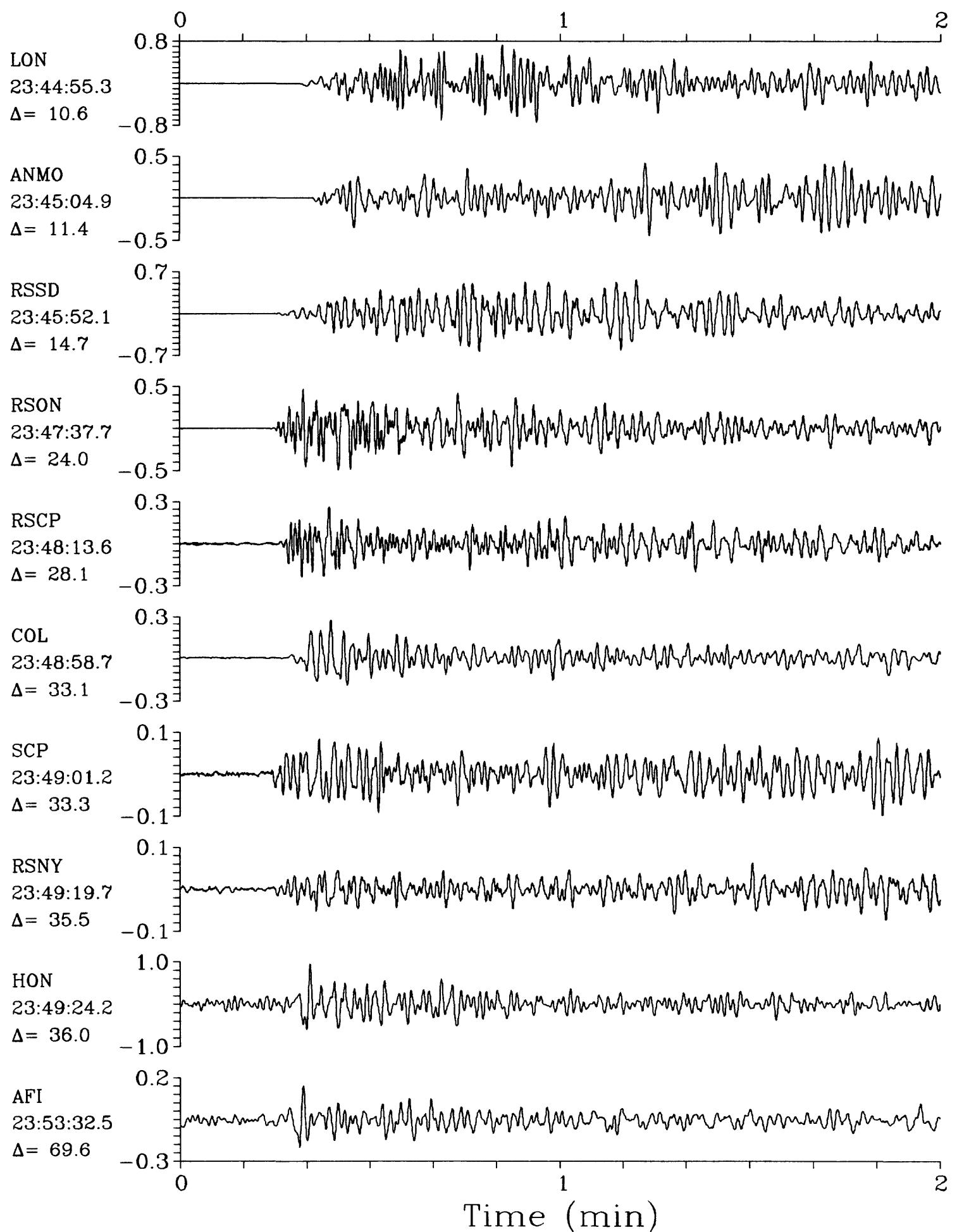


SPZ

02 May 1983 23:42:37.76

SPZ¹³⁹

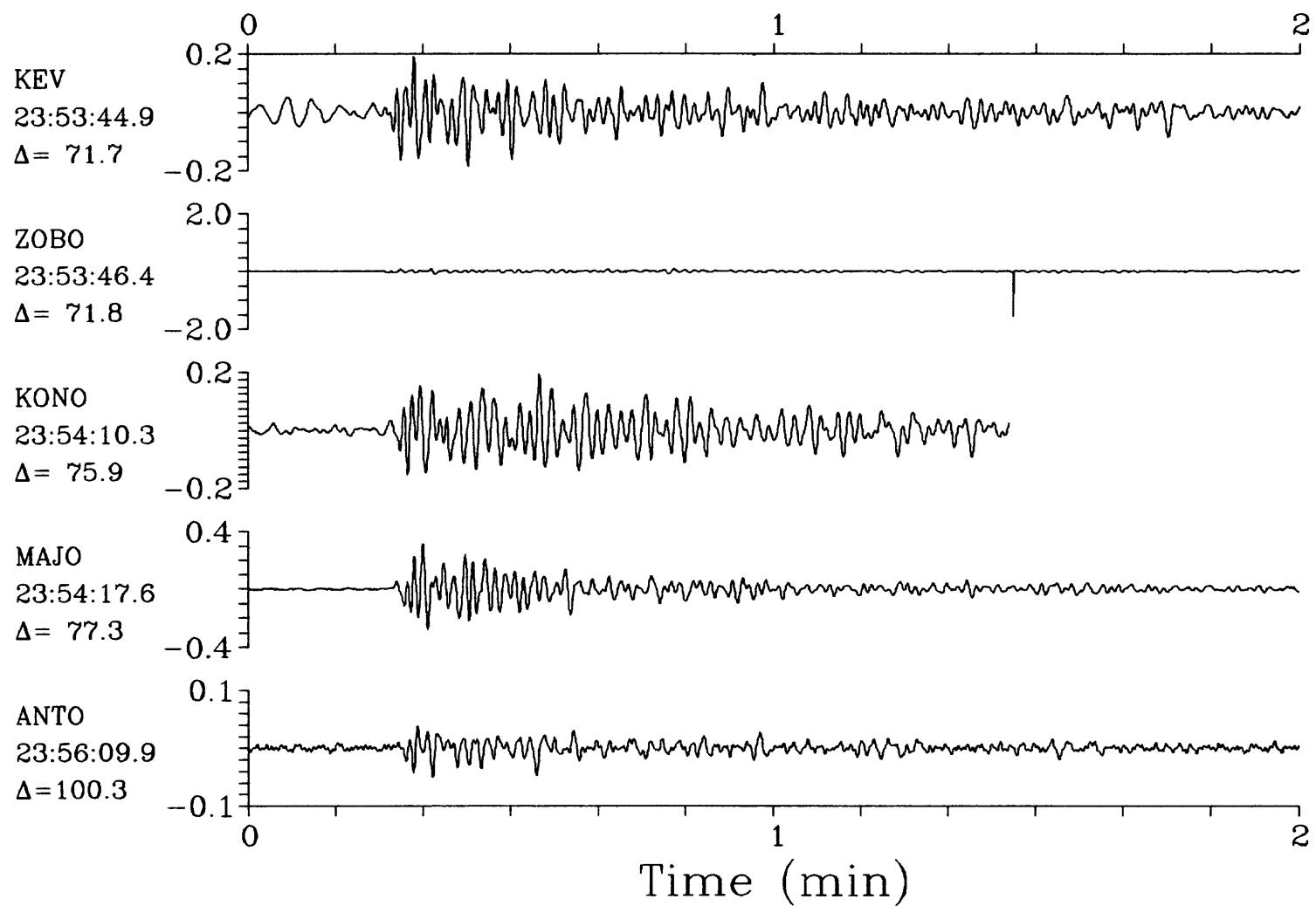
Central California h=10.2 MB=6.2 ms=6.5



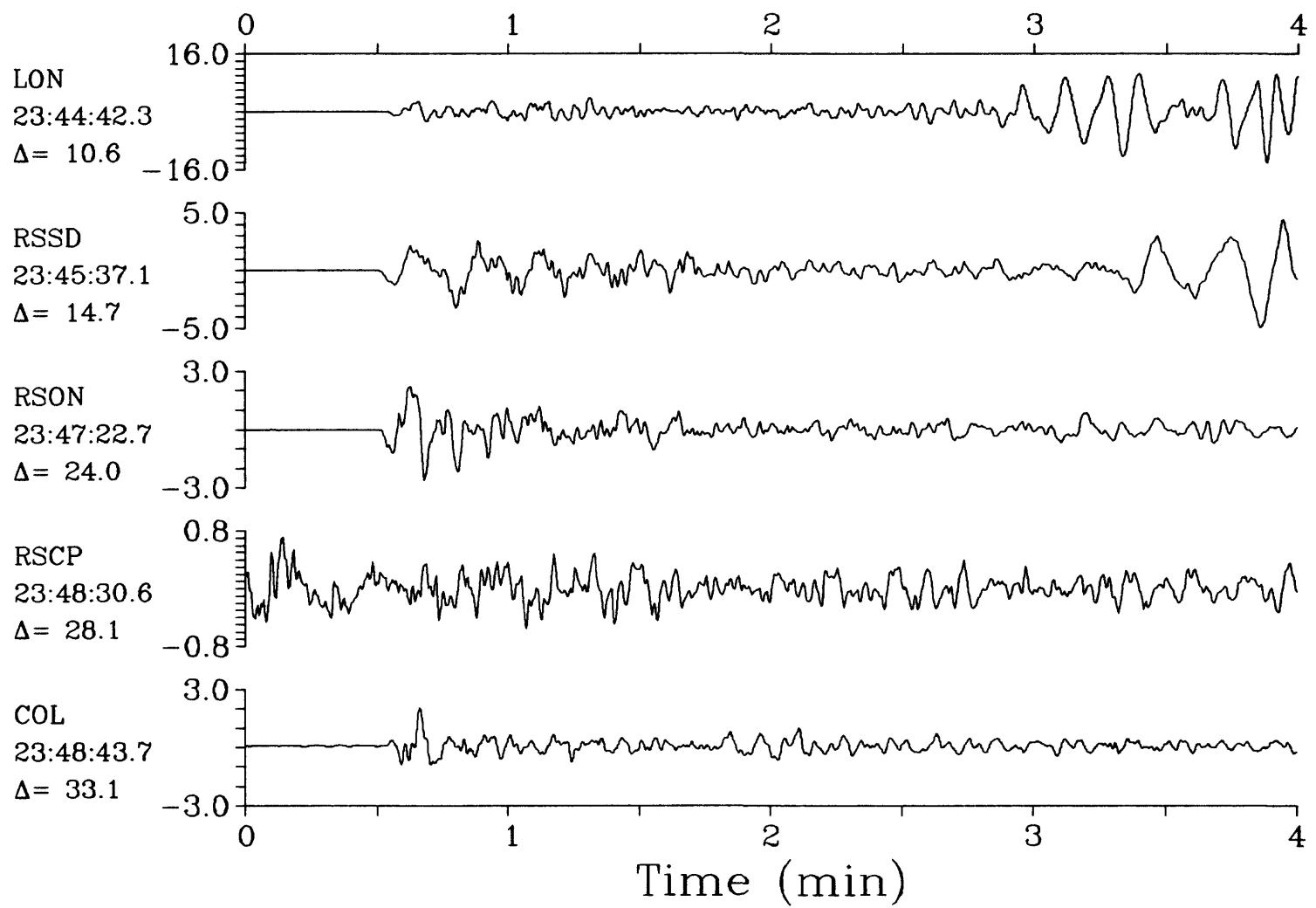
140 SPZ

02 May 1983 23:42:37.76
Central California h=10.2 MB=6.2 ms=6.5

SPZ



IPZ

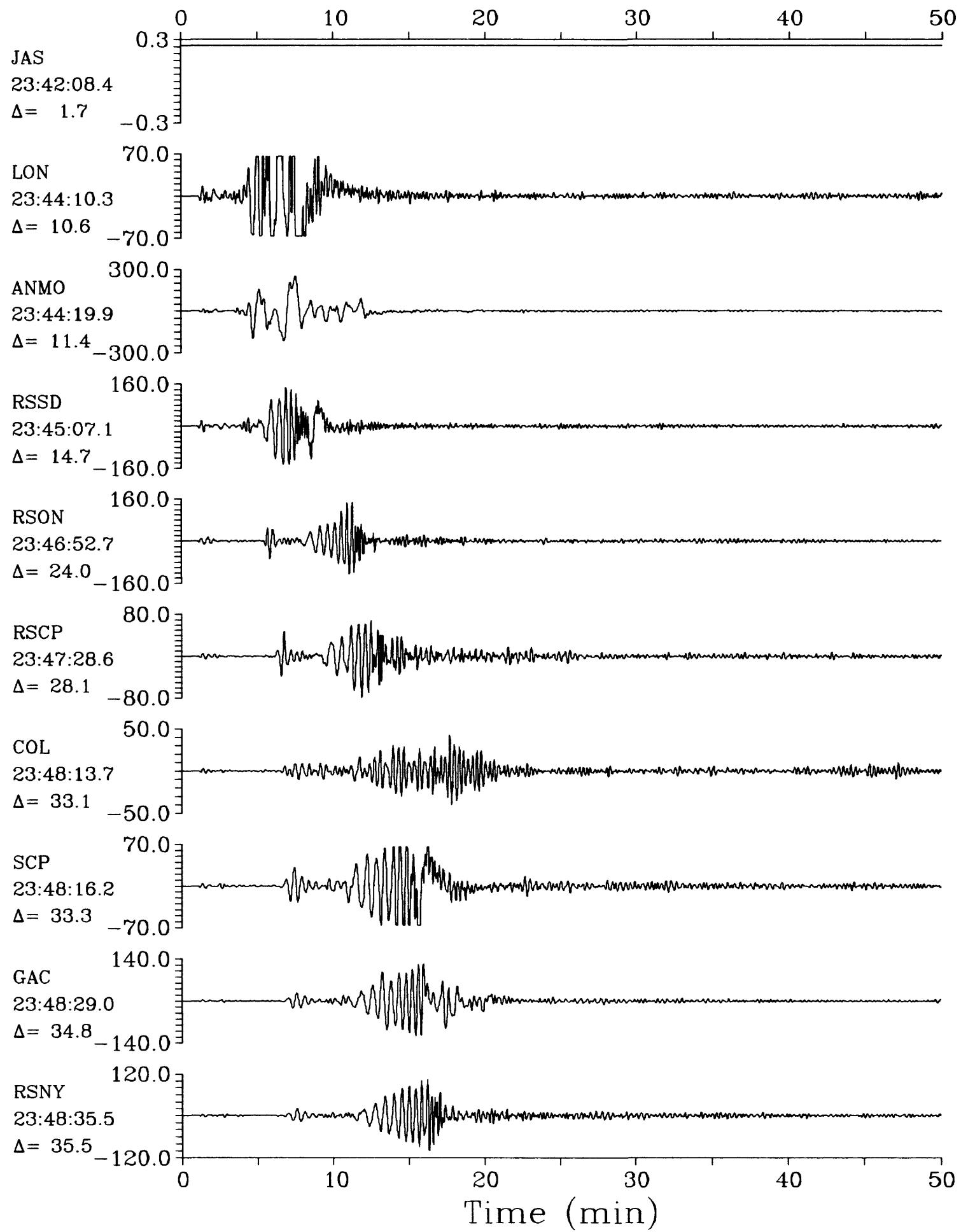
02 May 1983 23:42:37.76
Central California h=10.2 MB=6.2 ms=6.5IPZ¹⁴¹

142 LPZ

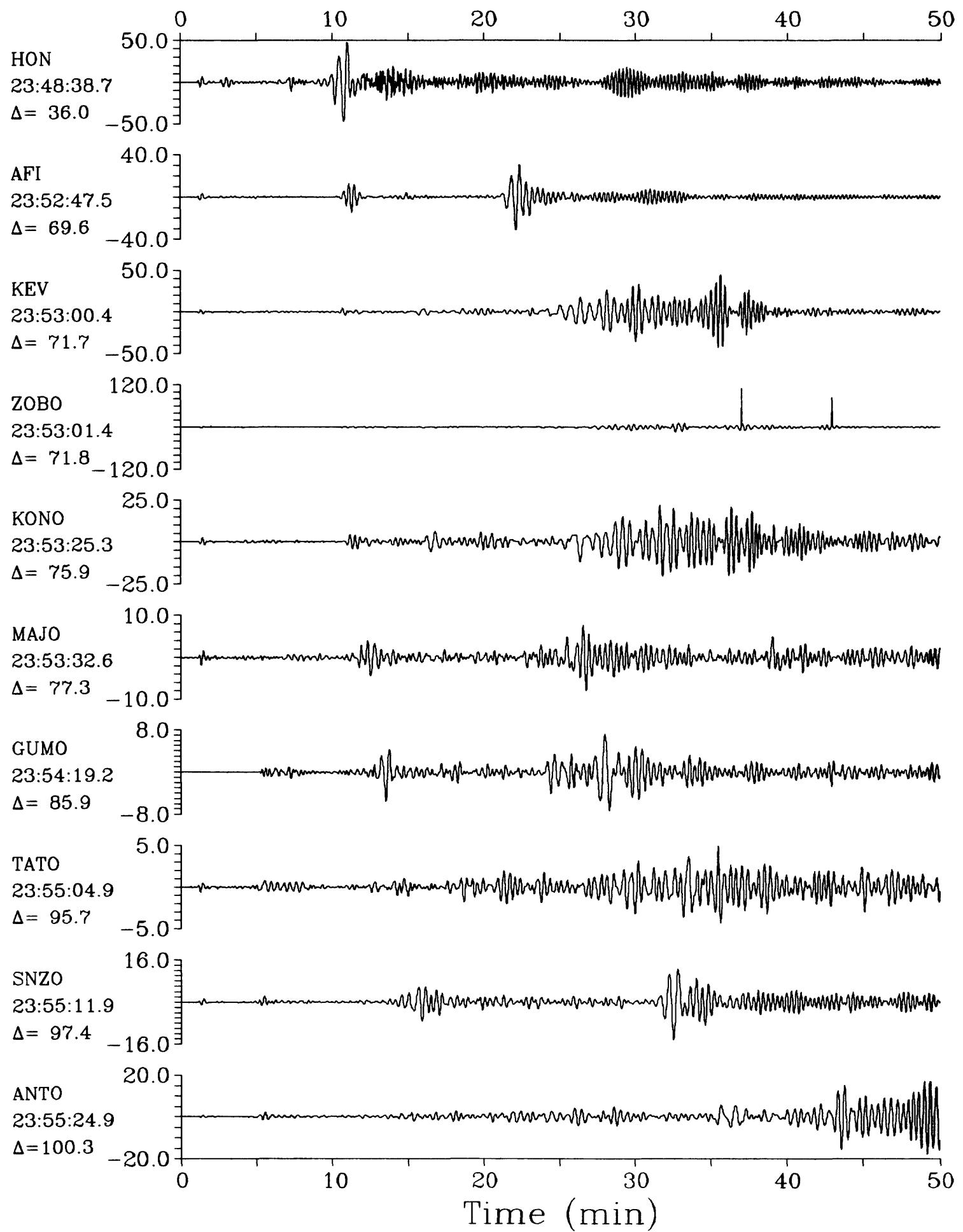
02 May 1983 23:42:37.76

LPZ

Central California h=10.2 MB=6.2 ms=6.5



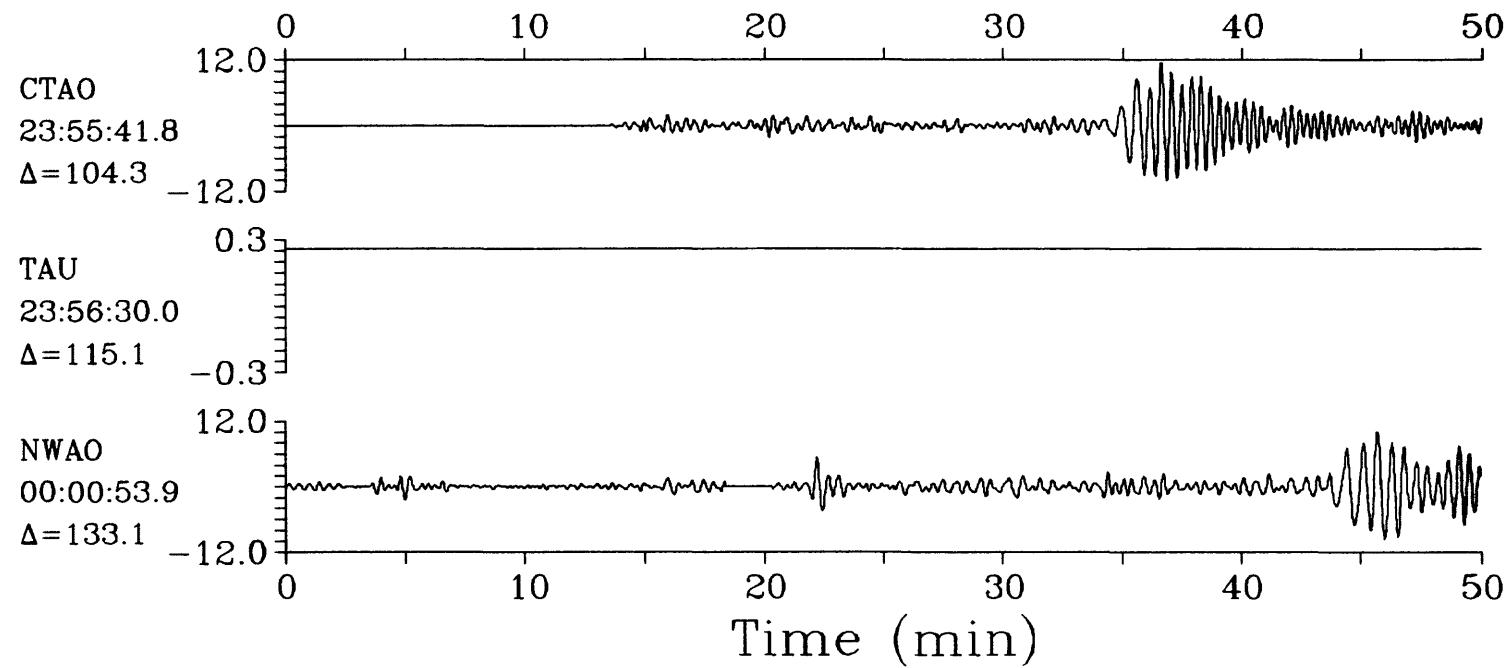
LPZ

02 May 1983 23:42:37.76
Central California h=10.2 MB=6.2 ms=6.5LPZ¹⁴³

¹⁴⁴LPZ

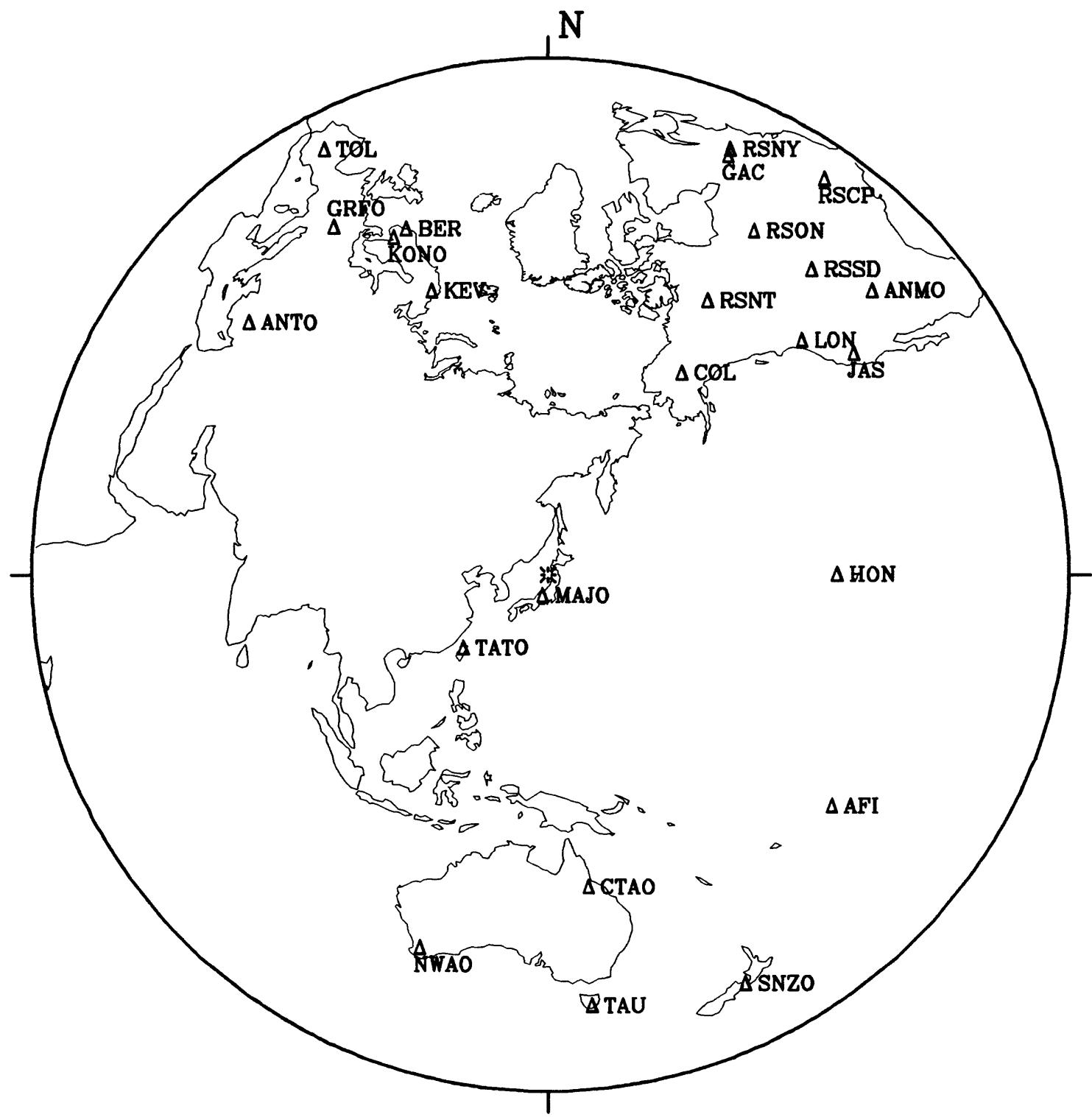
02 May 1983 23:42:37.76
Central California h=10.2 MB=6.2 ms=6.5

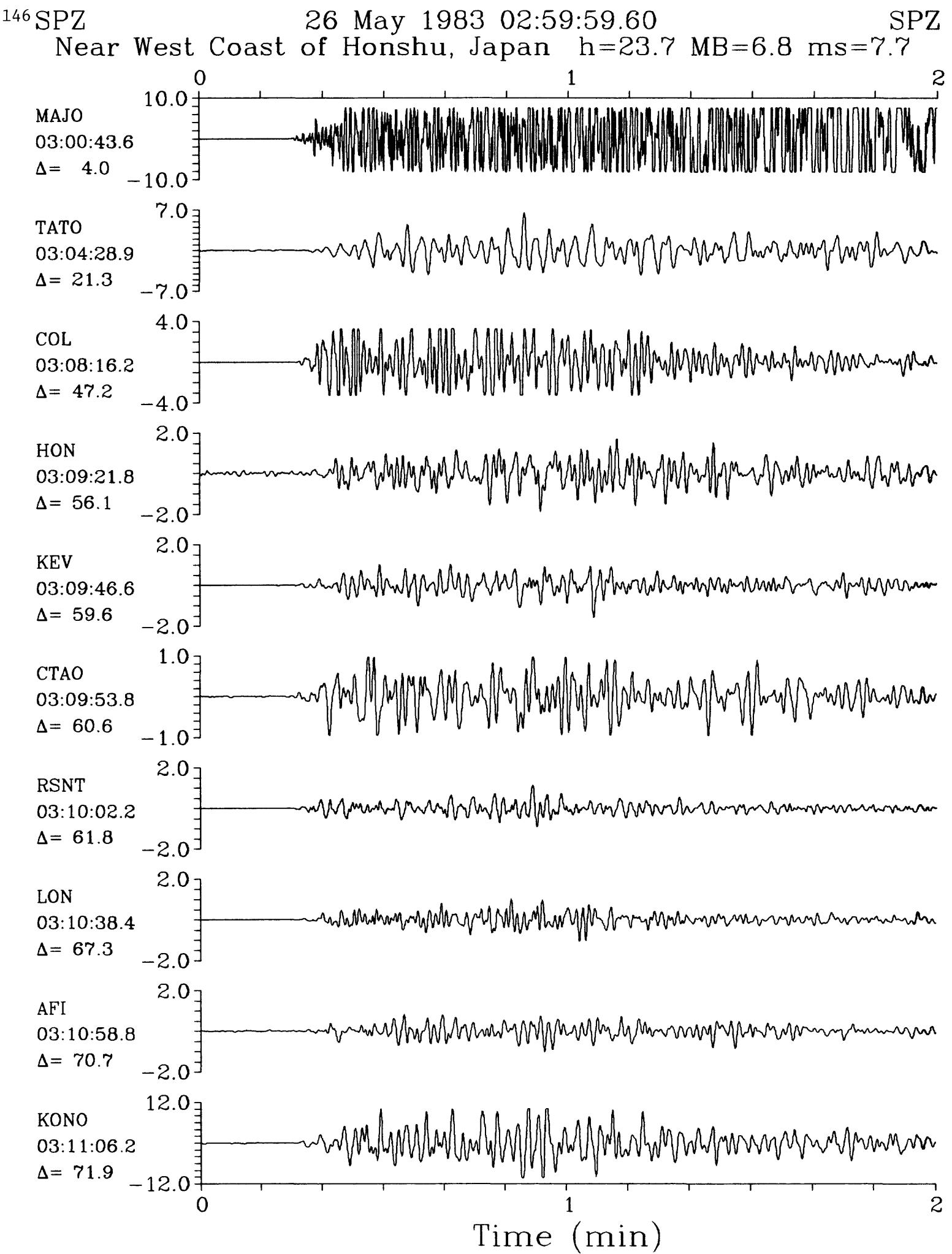
LPZ



26 May 1983 02:59:59.60

Near West Coast of Honshu, Japan



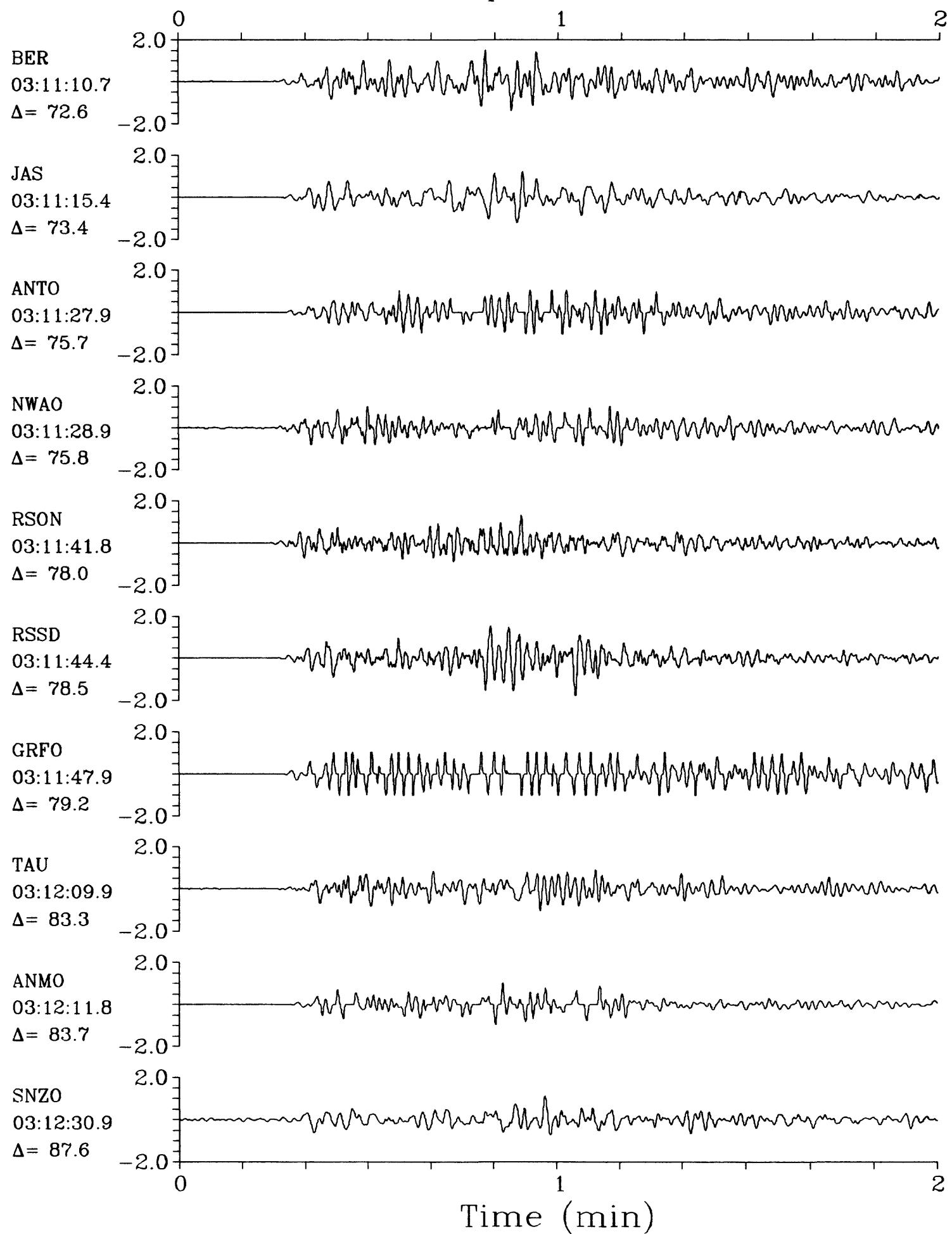


SPZ

26 May 1983 02:59:59.60

SPZ¹⁴⁷

Near West Coast of Honshu, Japan h=23.7 MB=6.8 ms=7.7

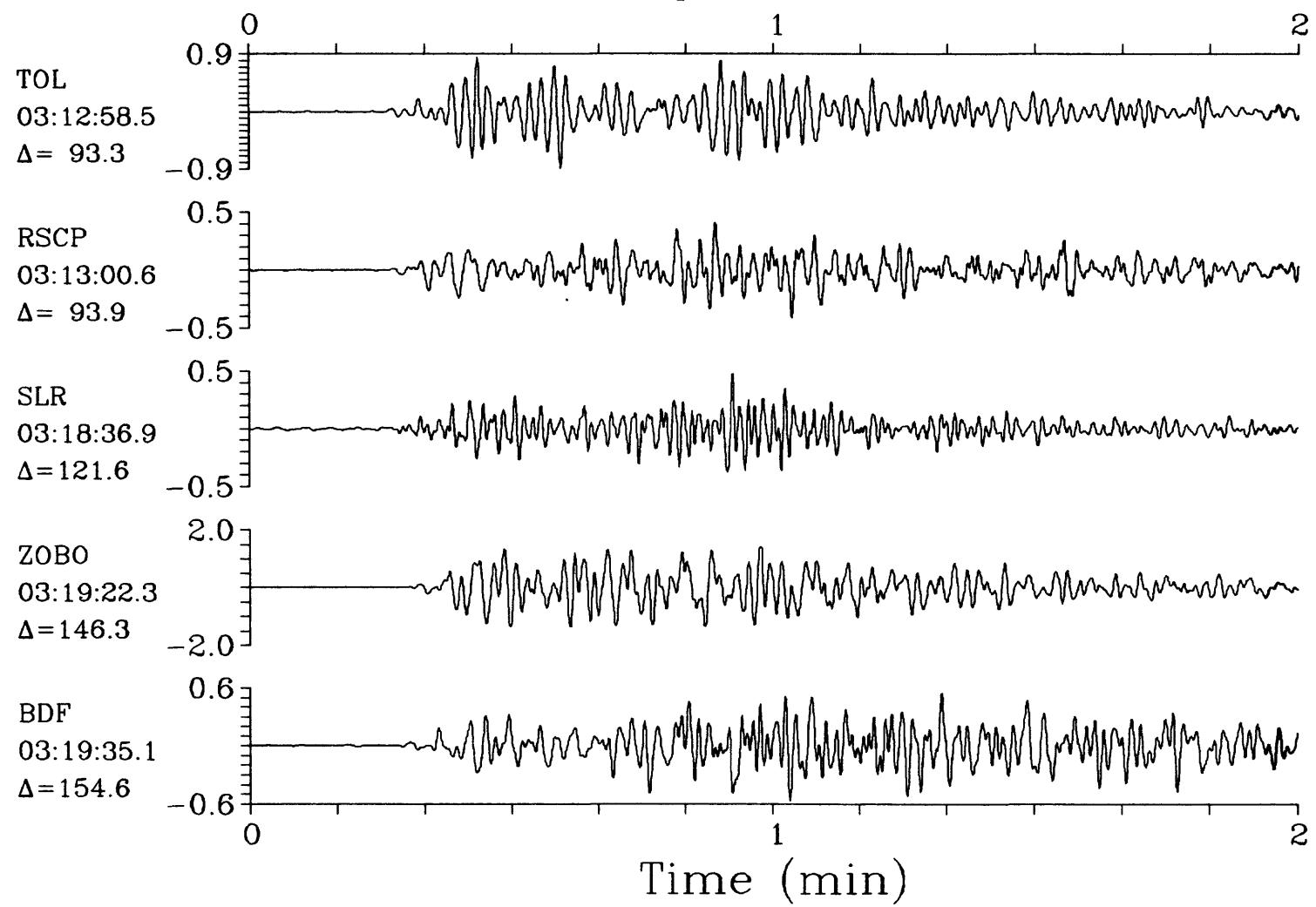


¹⁴⁸SPZ

26 May 1983 02:59:59.60

SPZ

Near West Coast of Honshu, Japan h=23.7 MB=6.8 ms=7.7

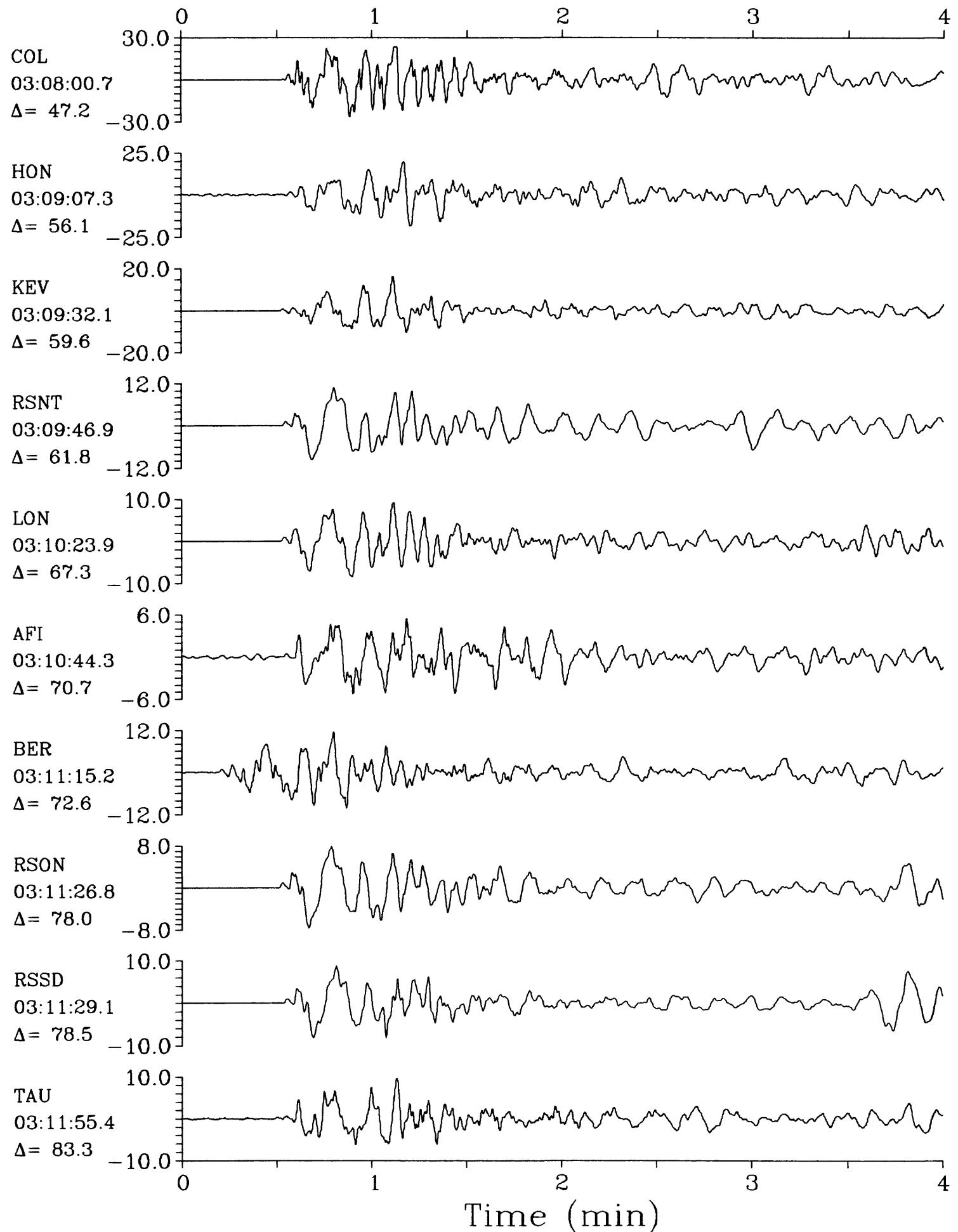


IPZ

26 May 1983 02:59:59.60

IPZ¹⁴⁹

Near West Coast of Honshu, Japan h=23.7 MB=6.8 ms=7.7

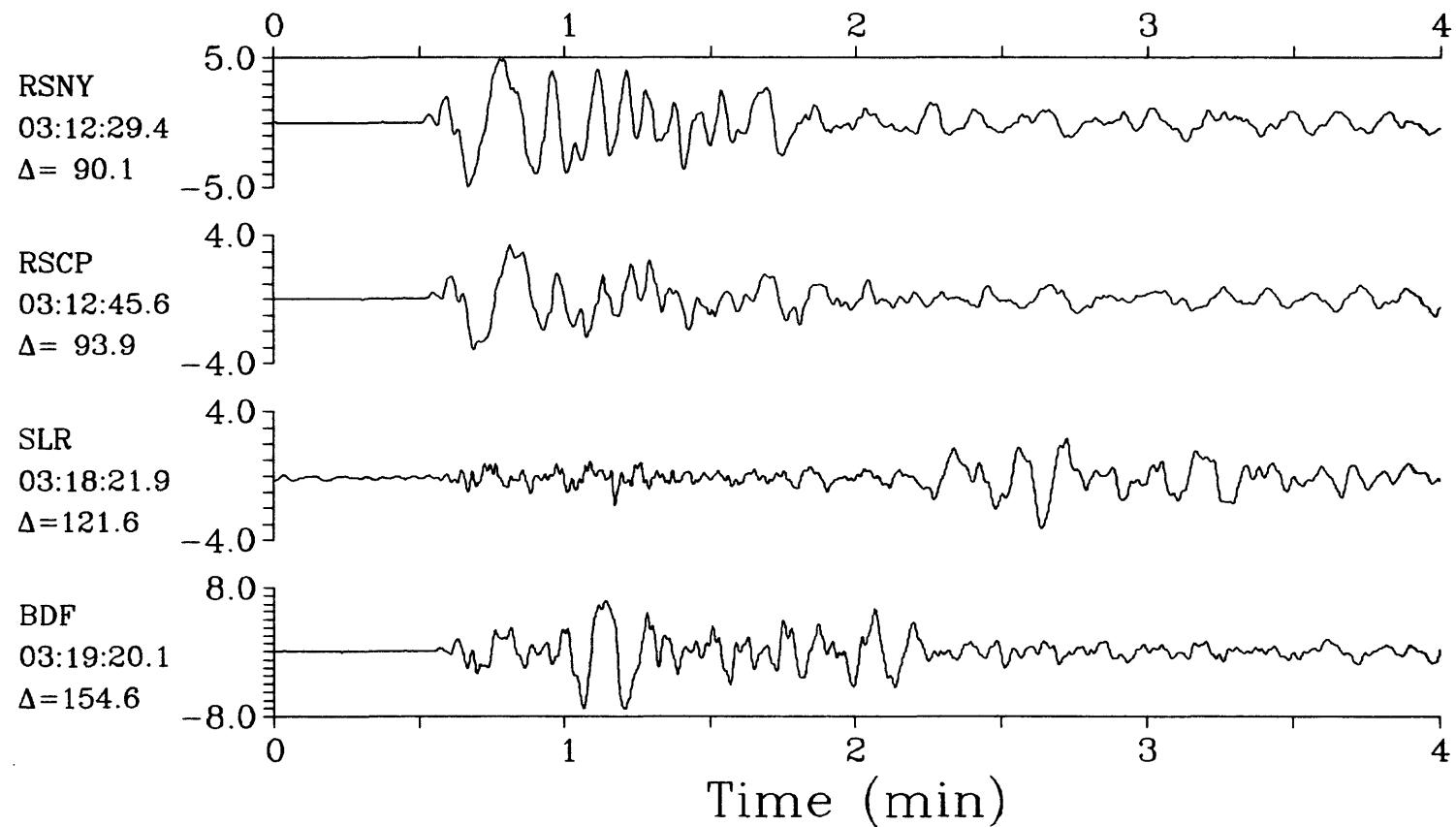


150 IPZ

26 May 1983 02:59:59.60

IPZ

Near West Coast of Honshu, Japan h=23.7 MB=6.8 ms=7.7

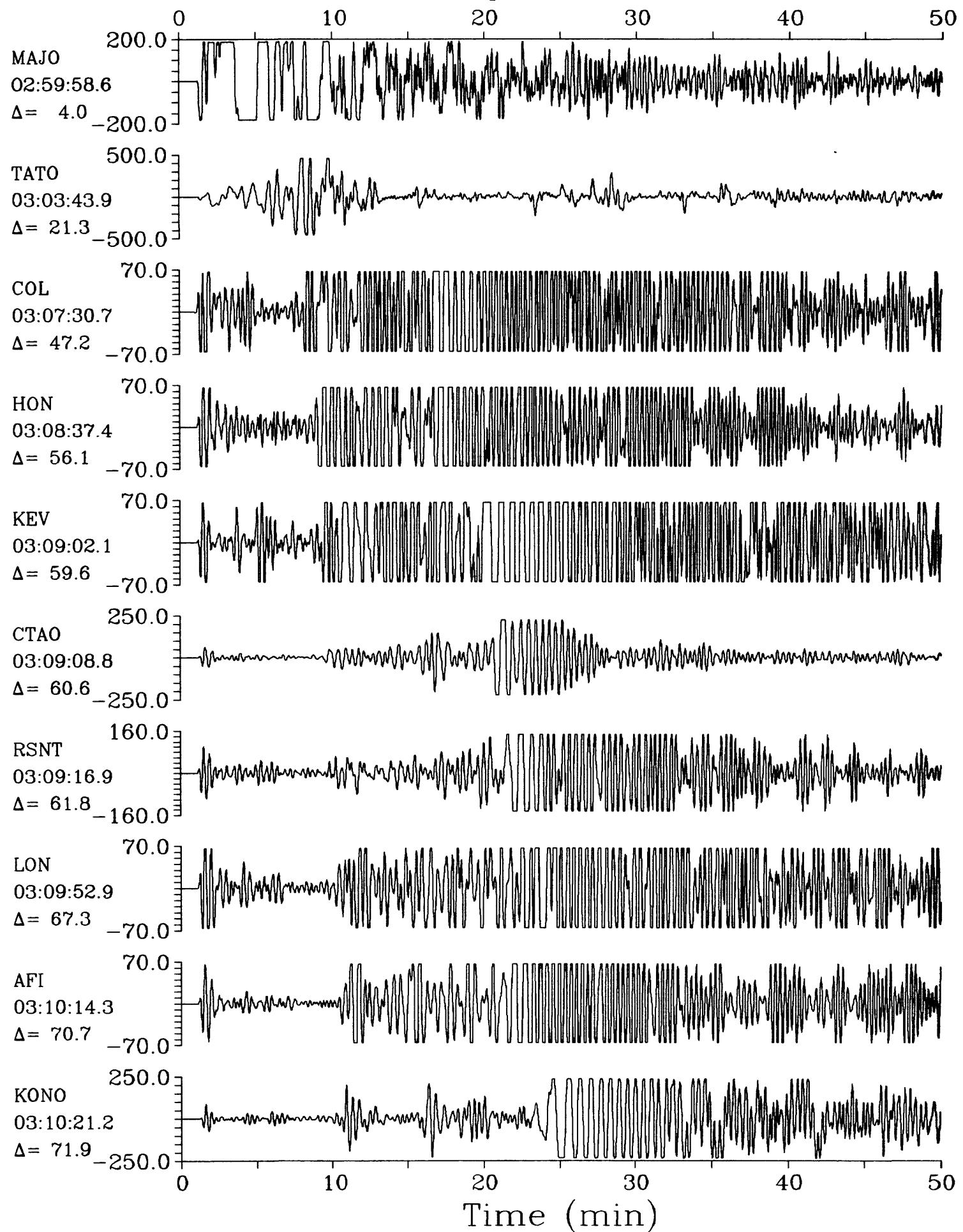


LPZ

26 May 1983 02:59:59.60

LPZ¹⁵¹

Near West Coast of Honshu, Japan h=23.7 MB=6.8 ms=7.7

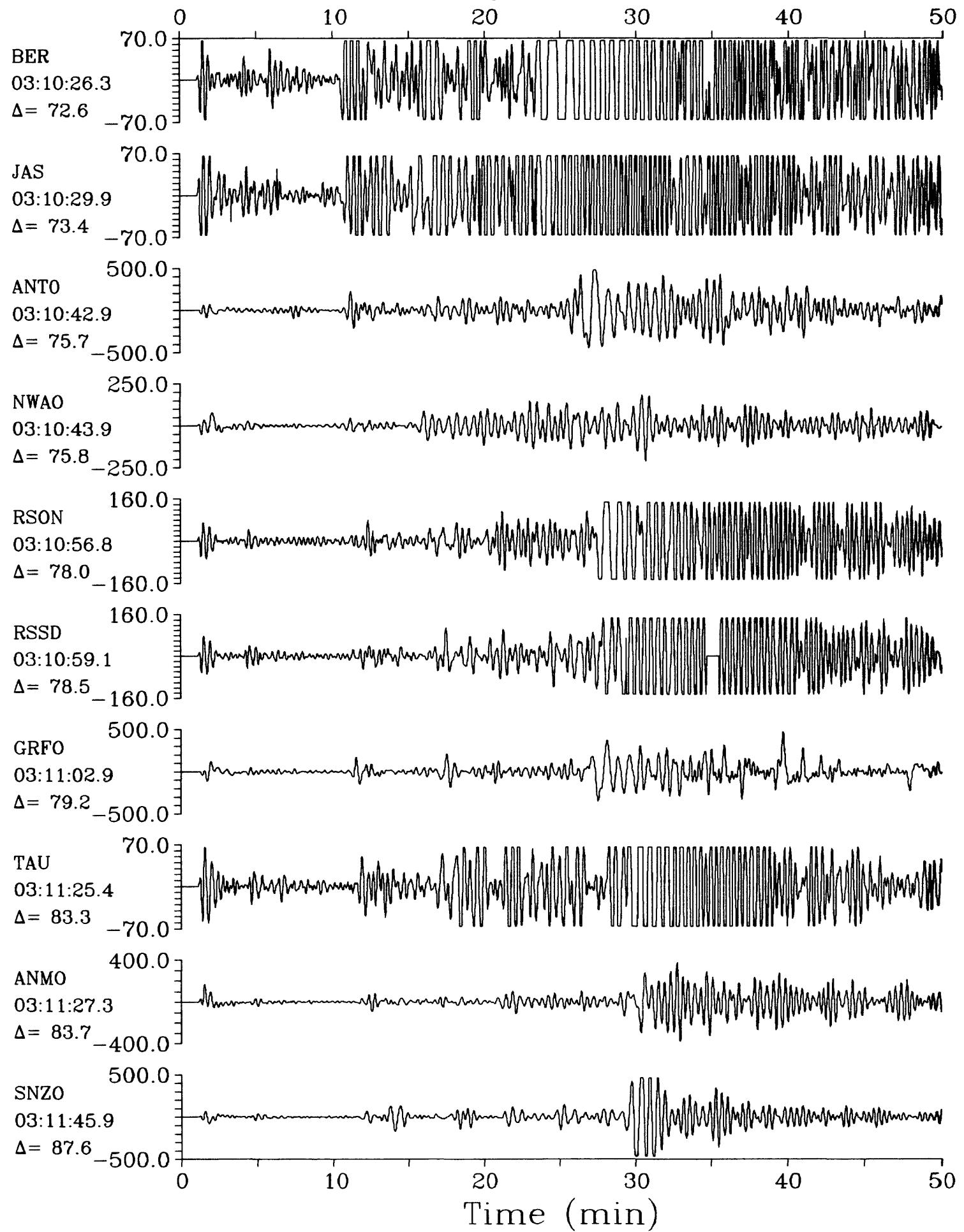


152 LPZ

26 May 1983 02:59:59.60

LPZ

Near West Coast of Honshu, Japan h=23.7 MB=6.8 ms=7.7

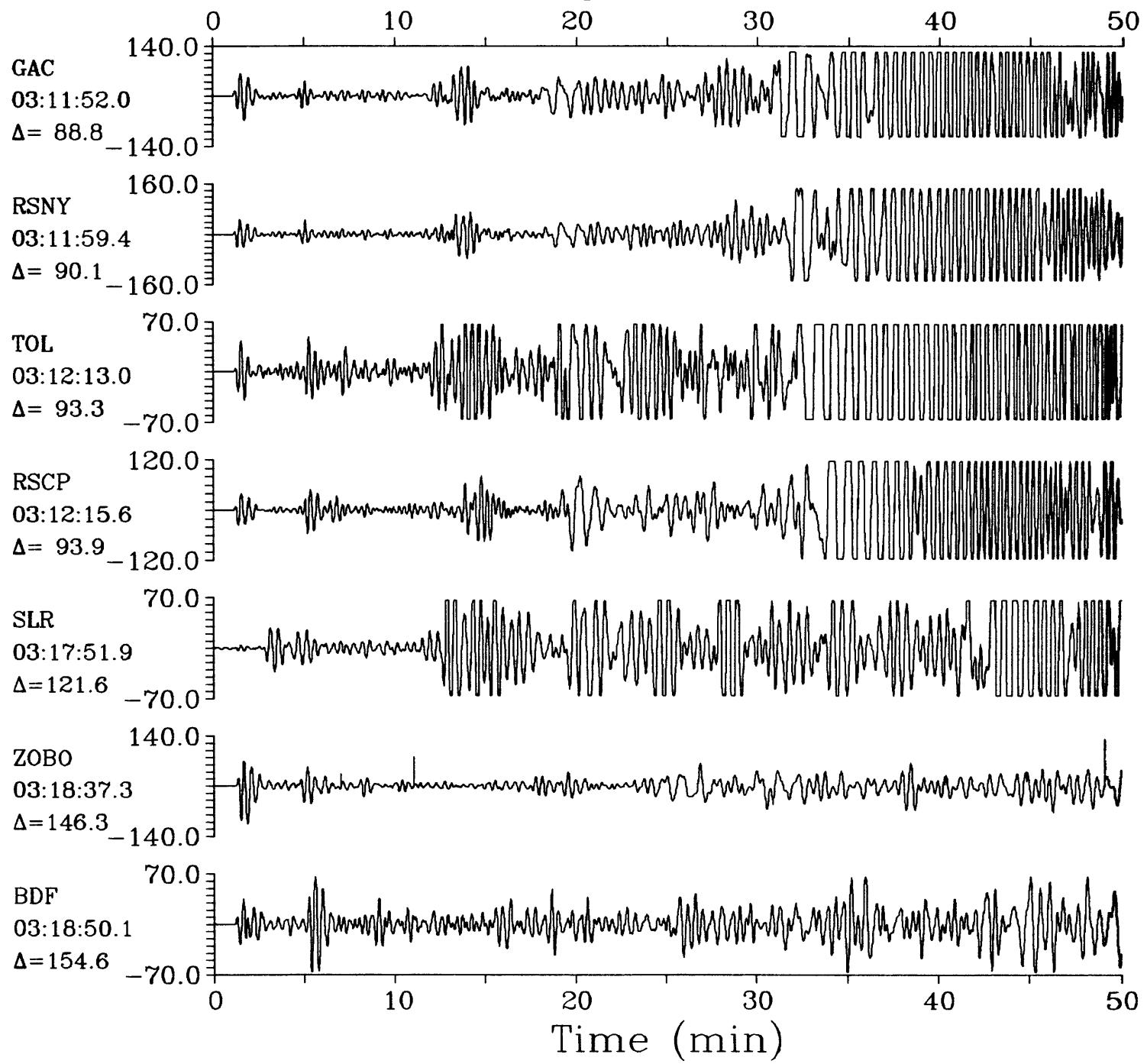


LPZ

26 May 1983 02:59:59.60

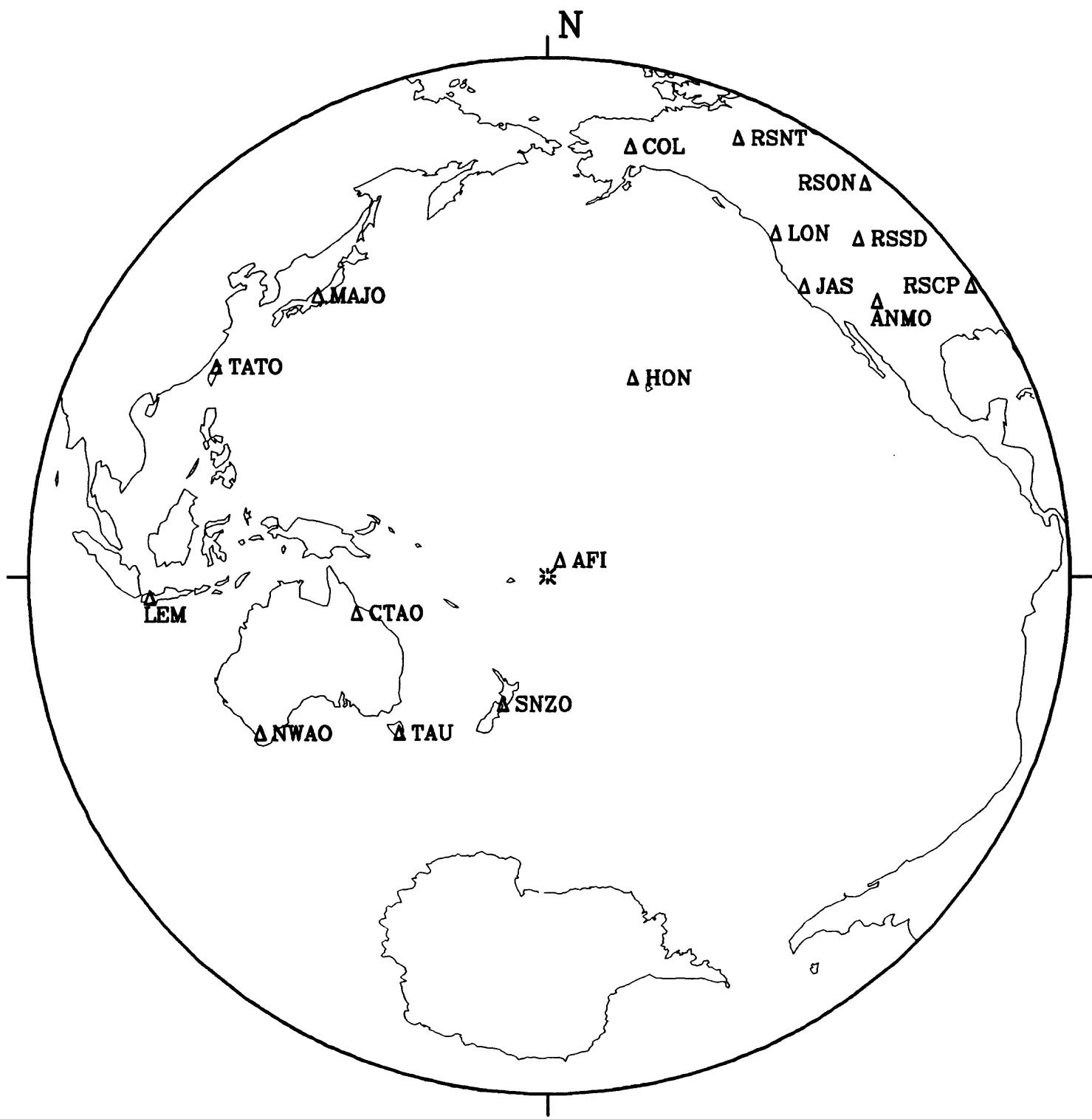
LPZ¹⁵³

Near West Coast of Honshu, Japan h=23.7 MB=6.8 ms=7.7

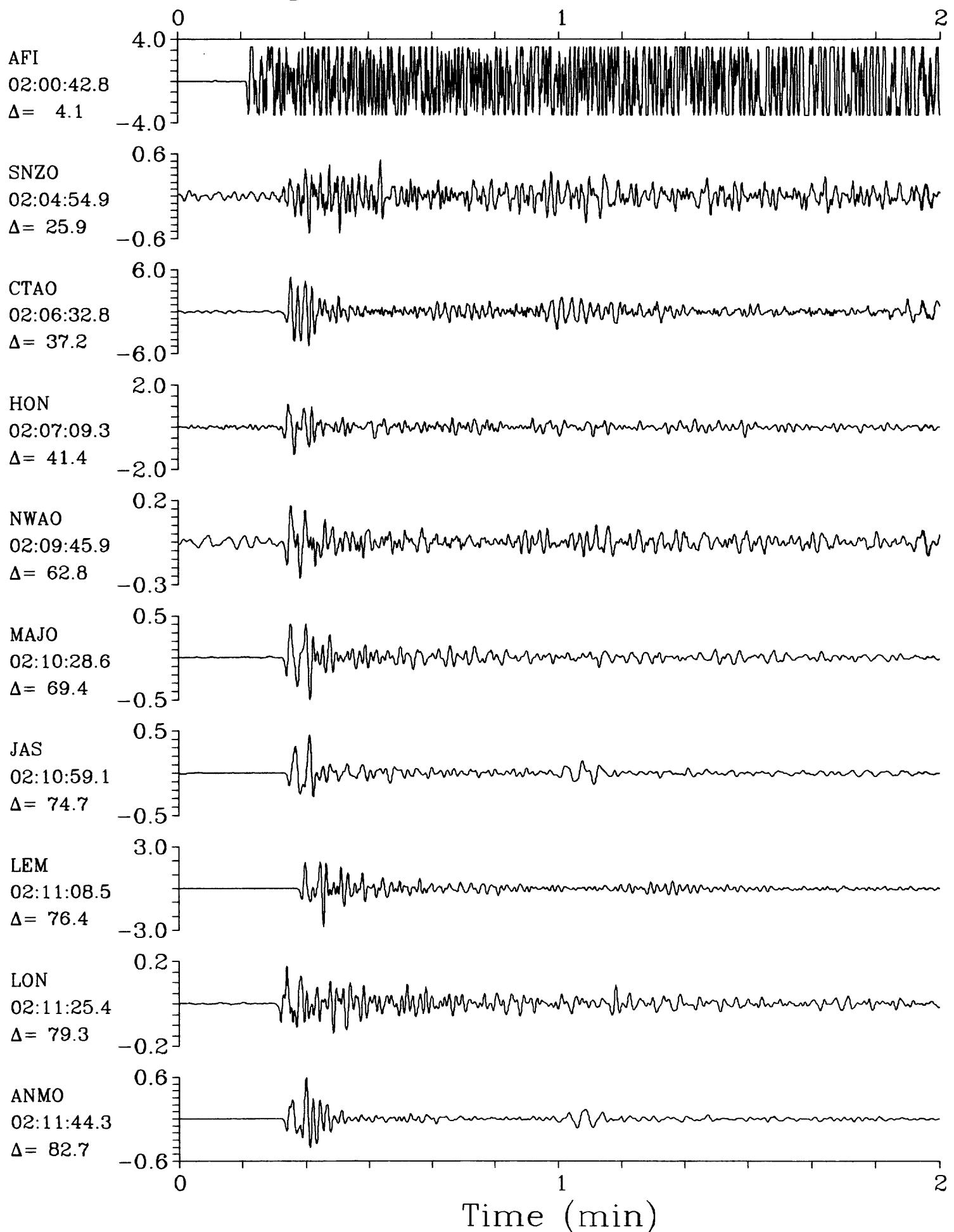


01 June 1983 01:59:54.68

Tonga Islands



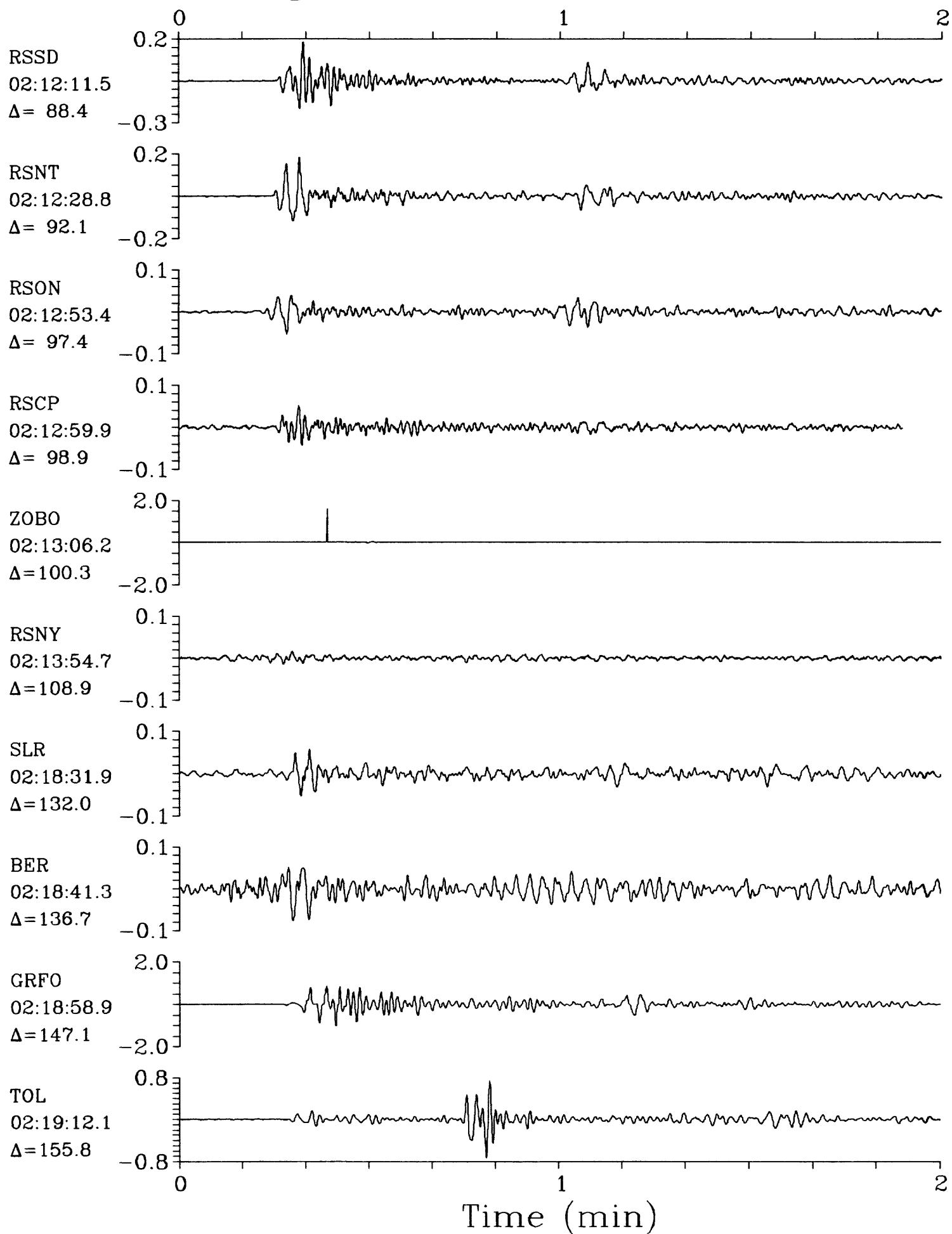
SPZ

01 June 1983 01:59:54.68
Tonga Islands h=179.6 MB=6.2SPZ¹⁵⁵

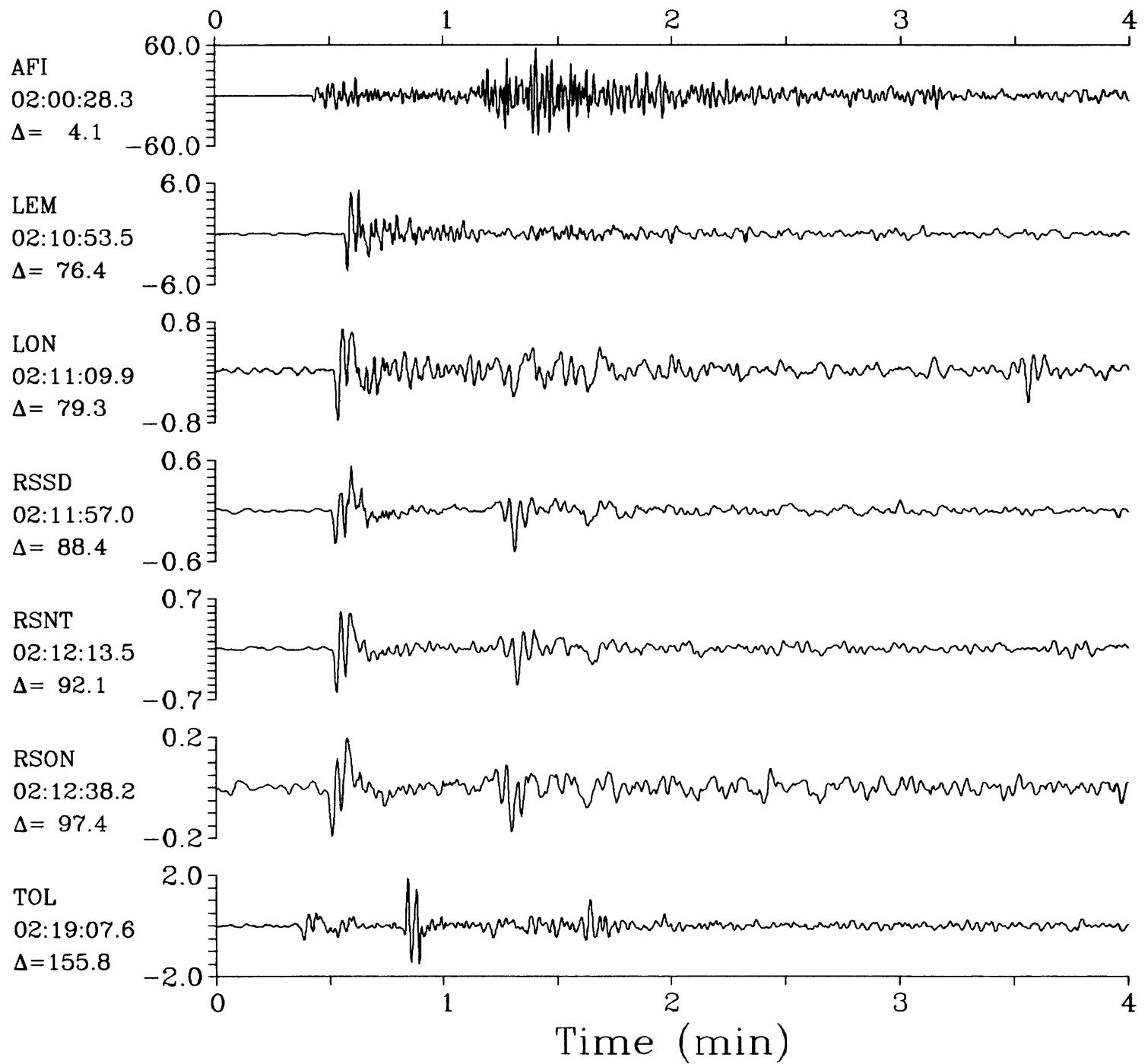
¹⁵⁶SPZ

01 June 1983 01:59:54.68
Tonga Islands h=179.6 MB=6.2

SPZ



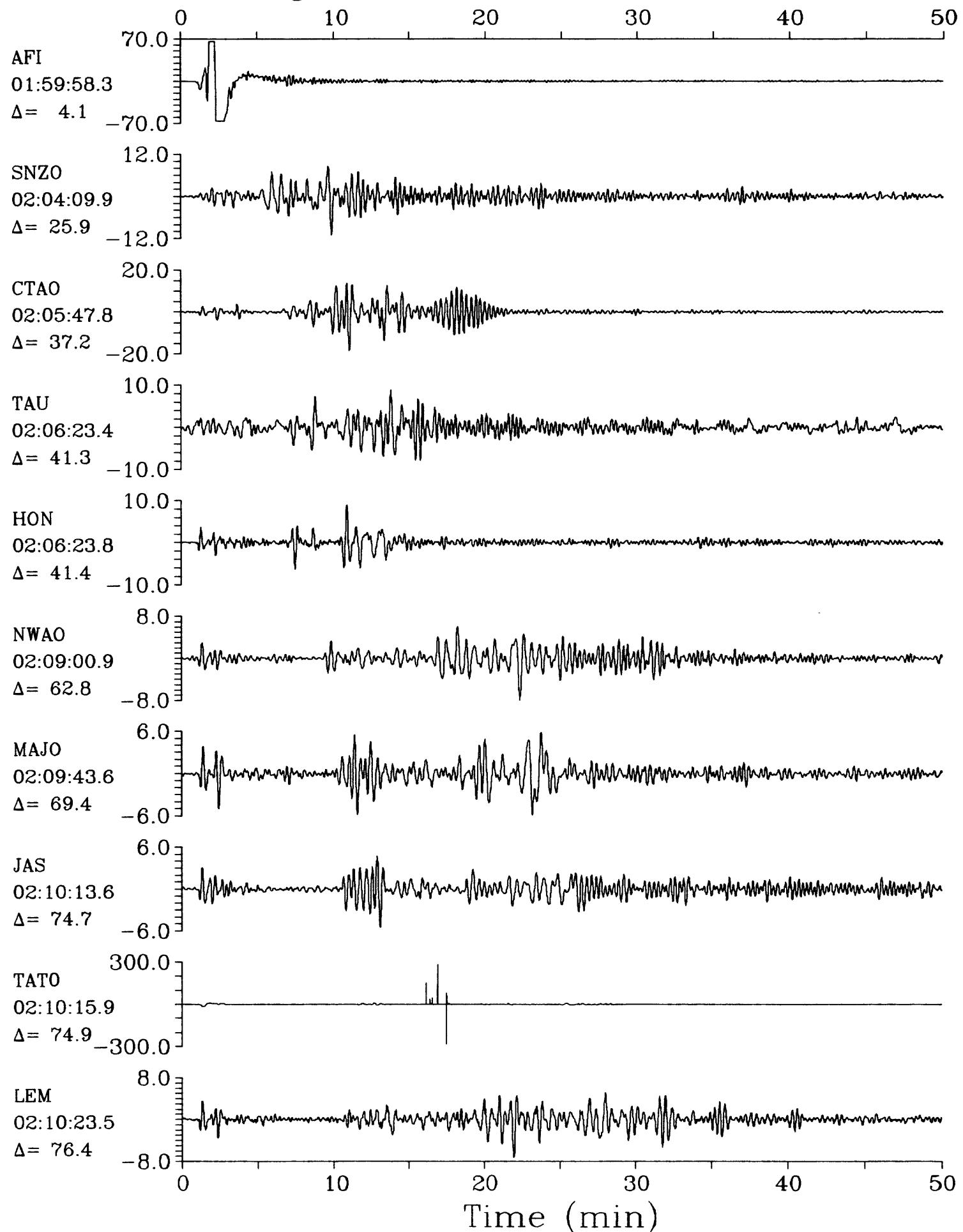
IPZ

01 June 1983 01:59:54.68
Tonga Islands h=179.6 MB=6.2IPZ¹⁵⁷

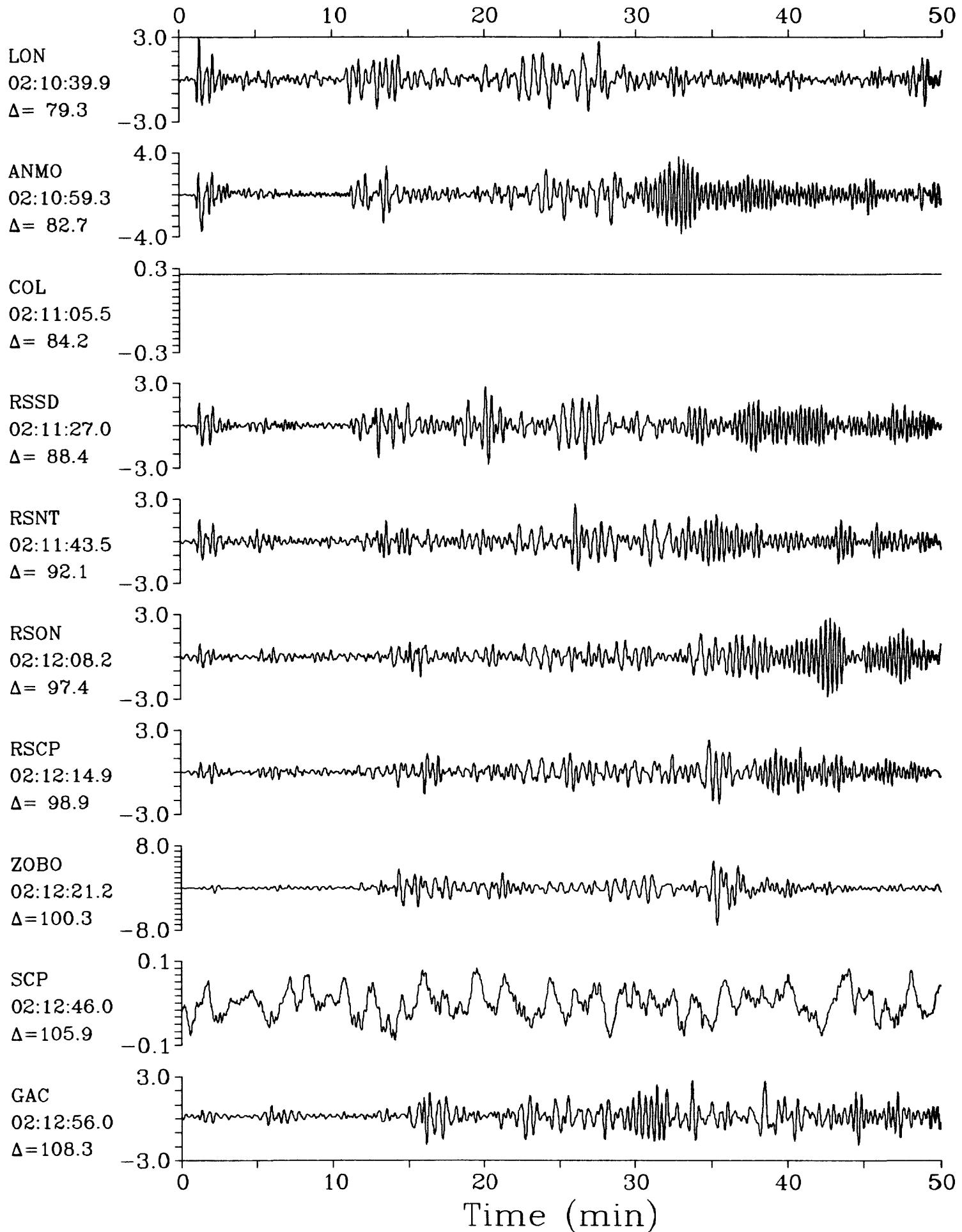
158 LPZ

01 June 1983 01:59:54.68
Tonga Islands h=179.6 MB=6.2

LPZ



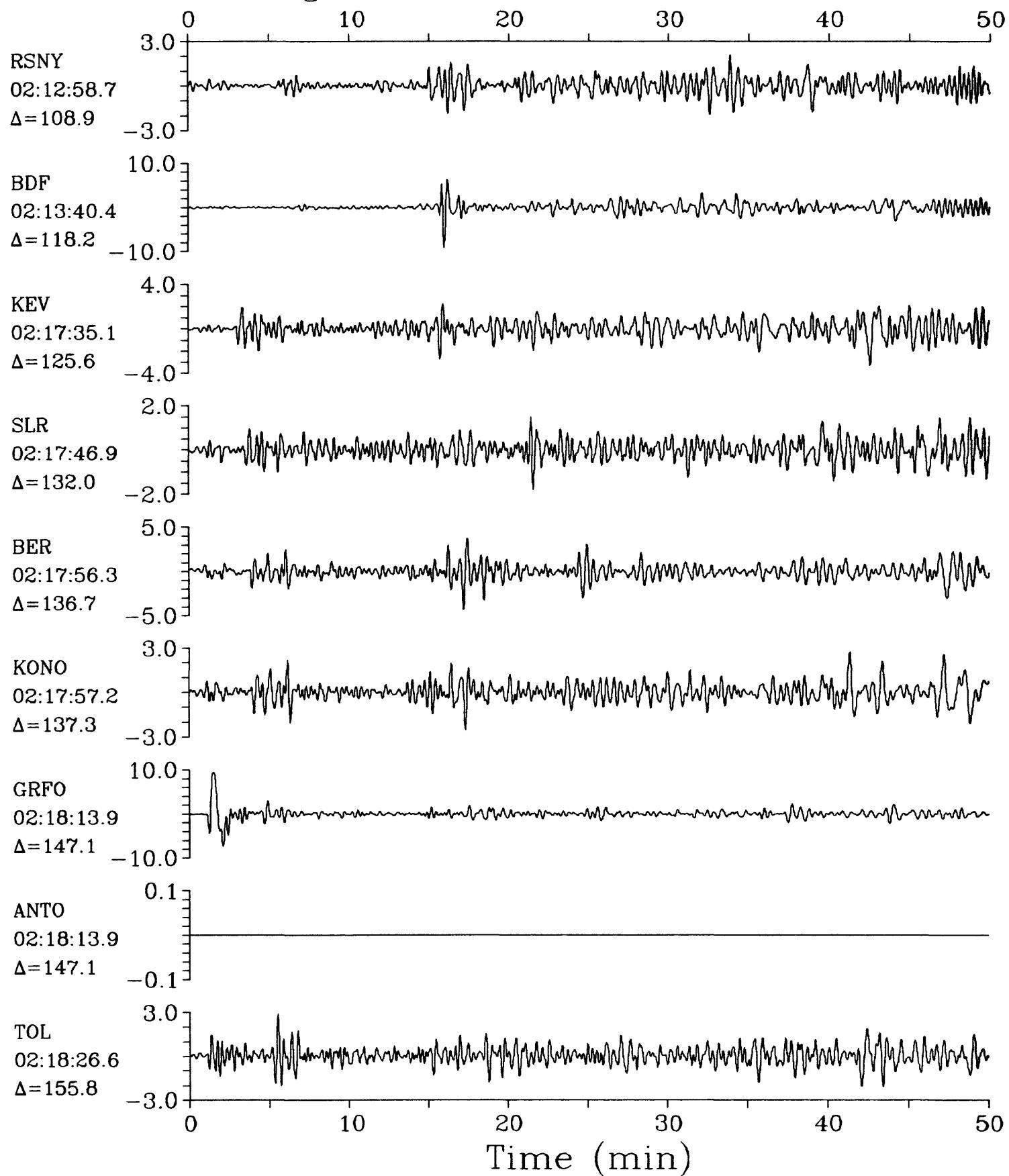
LPZ

01 June 1983 01:59:54.68
Tonga Islands h=179.6 MB=6.2LPZ¹⁵⁹

160 LPZ

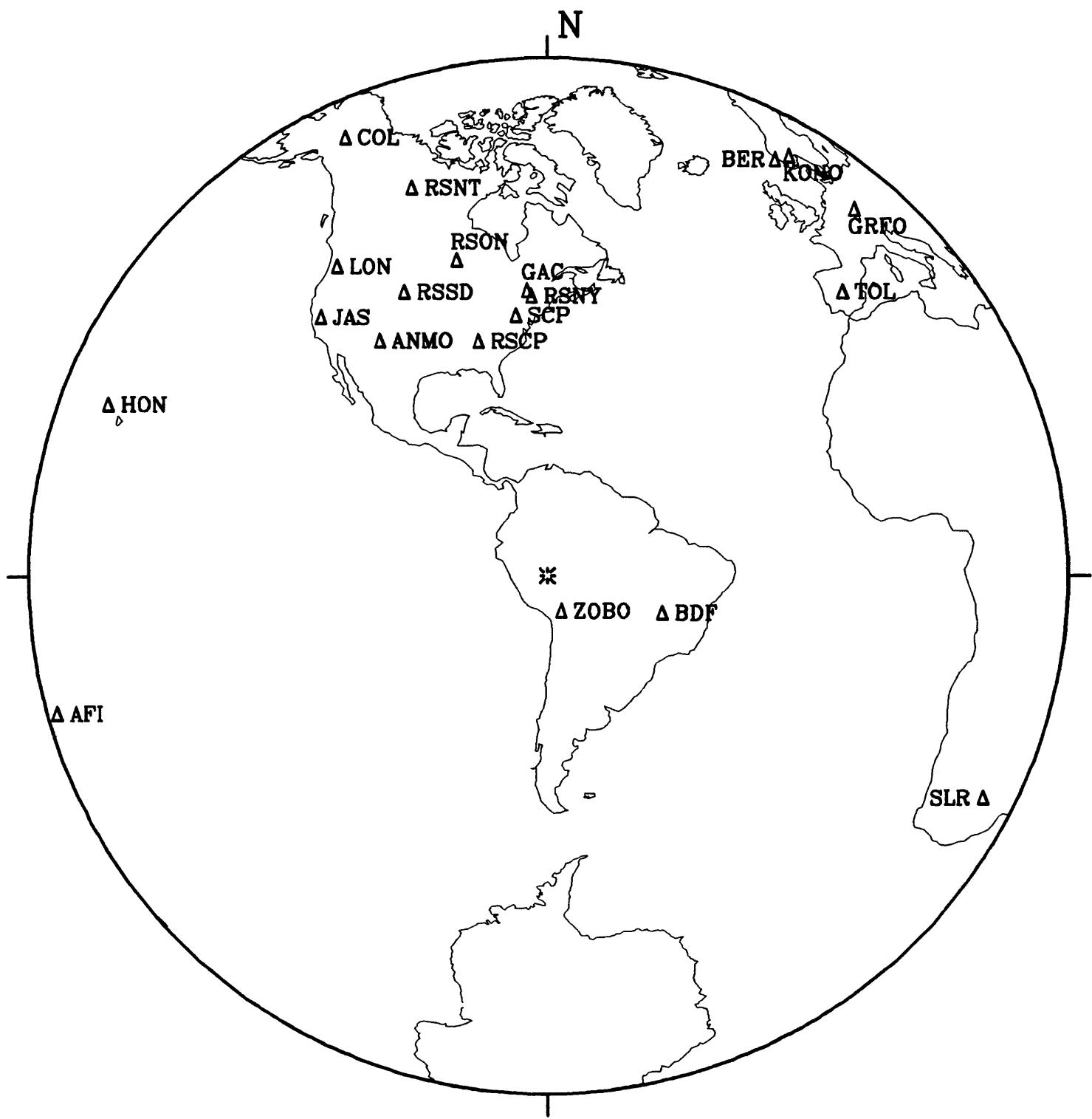
01 June 1983 01:59:54.68
Tonga Islands h=179.6 MB=6.2

LPZ



02 June 1983 20:12:50.73

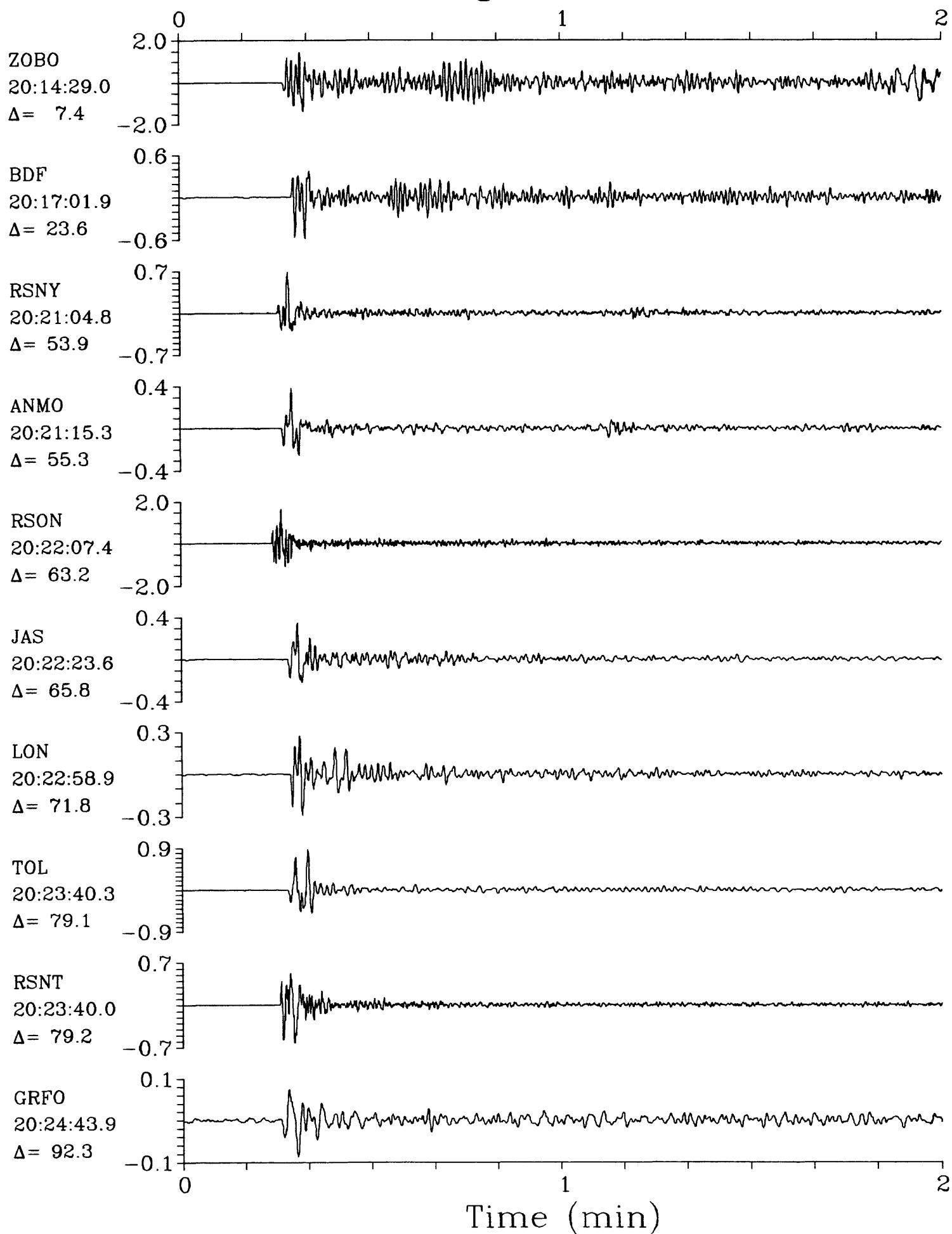
Peru–Brazil Border Region



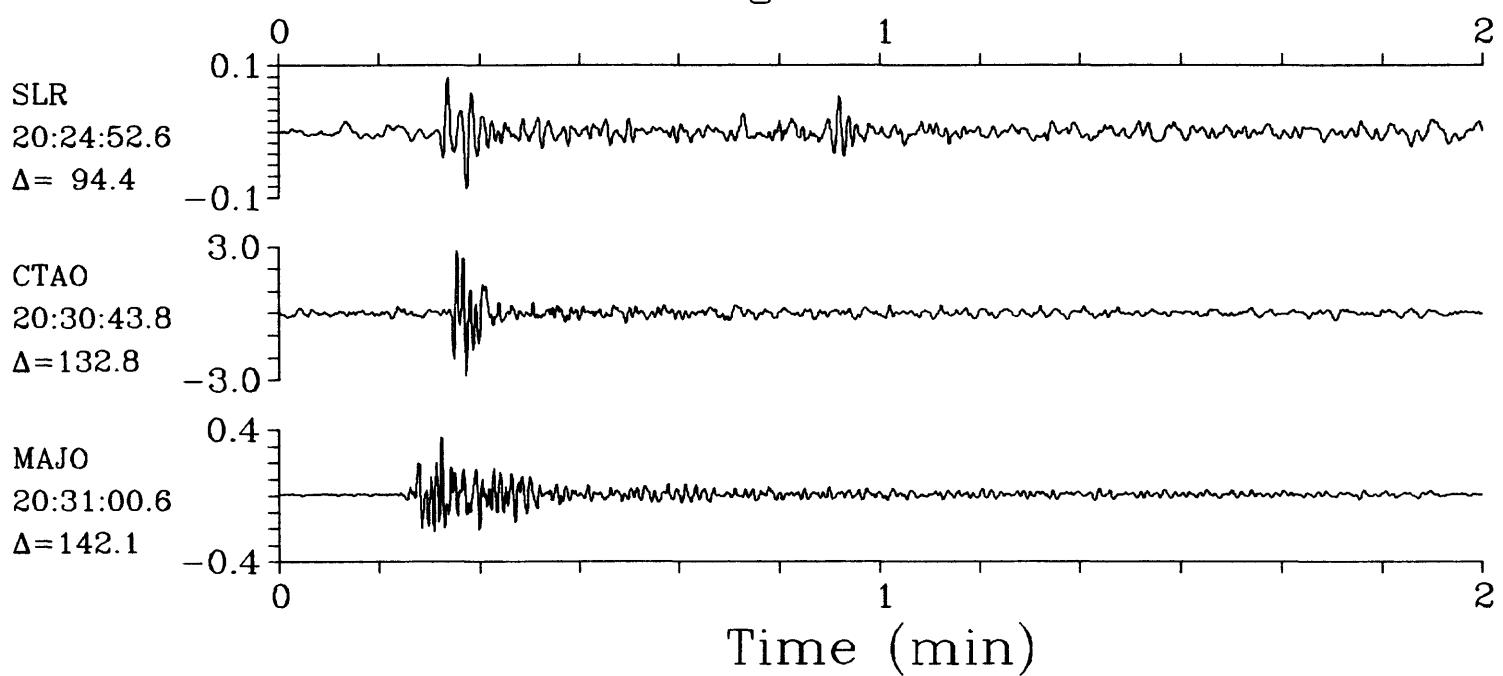
162 SPZ

02 June 1983 20:12:50.73
Peru-Brazil Border Region h=598.6 MB=5.9

SPZ



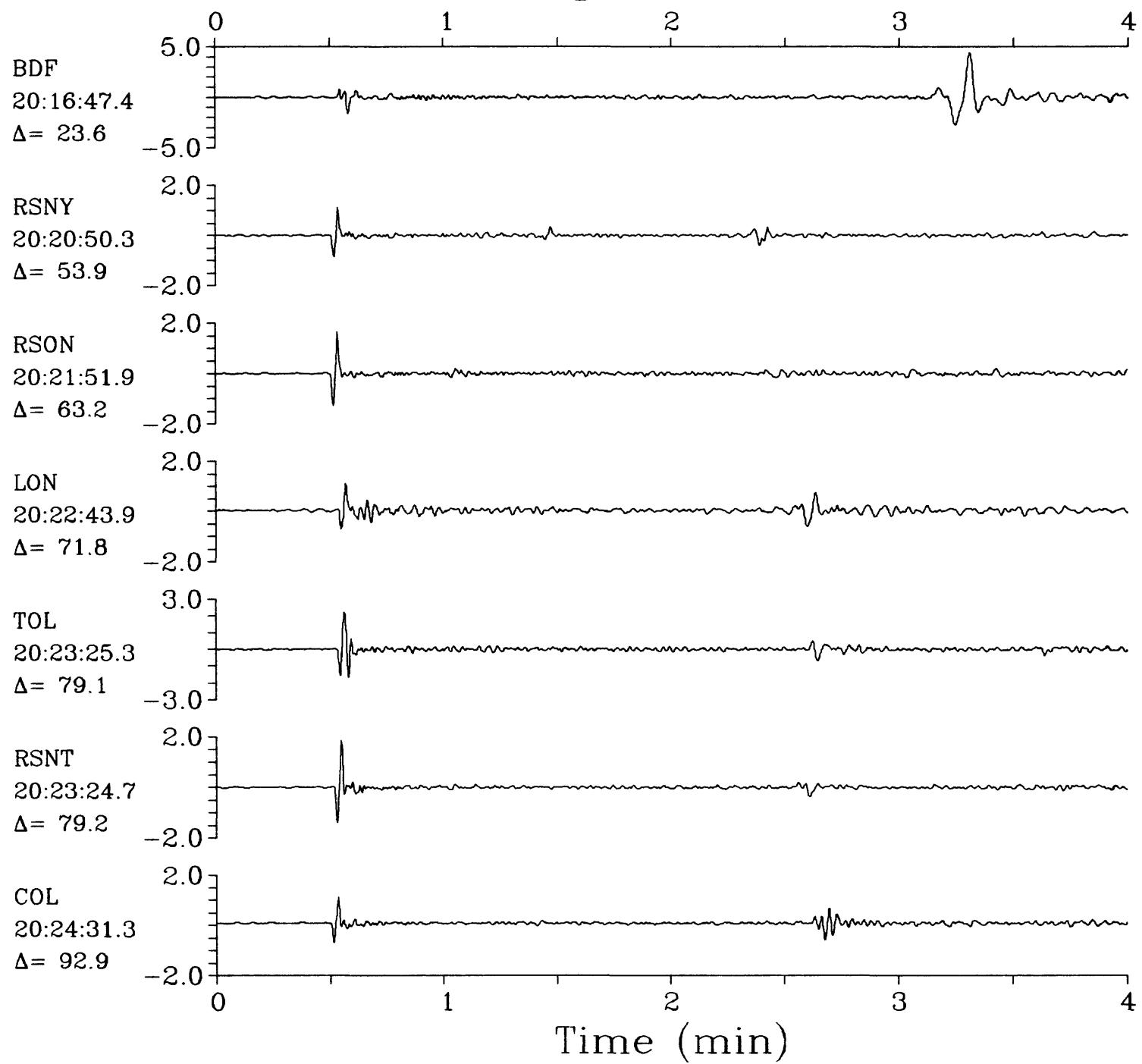
SPZ

02 June 1983 20:12:50.73
Peru-Brazil Border Region h=598.6 MB=5.9SPZ¹⁶³

¹⁶⁴IPZ

02 June 1983 20:12:50.73
Peru-Brazil Border Region h=598.6 MB=5.9

IPZ

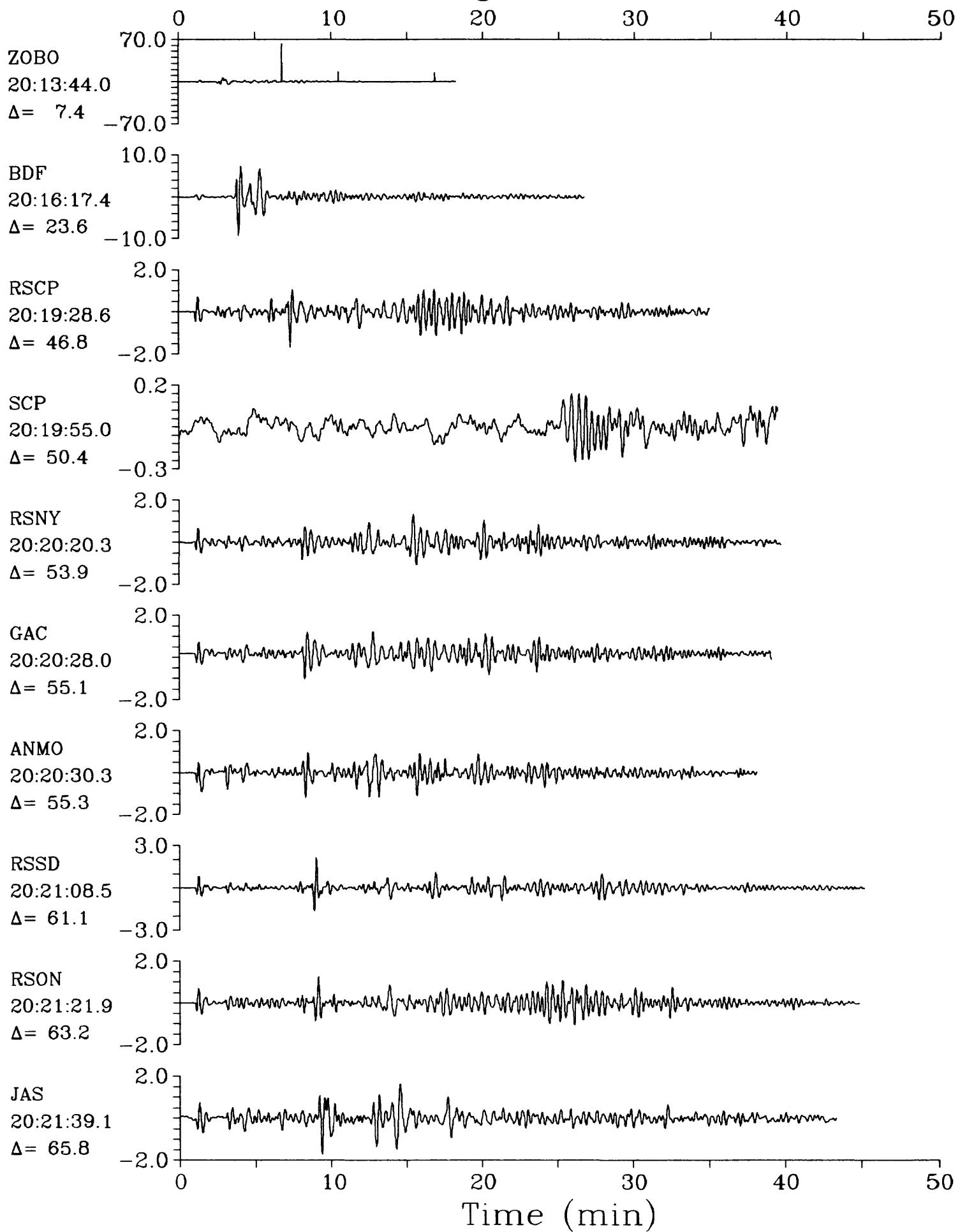


LPZ

02 June 1983 20:12:50.73

LPZ¹⁶⁵

Peru-Brazil Border Region h=598.6 MB=5.9

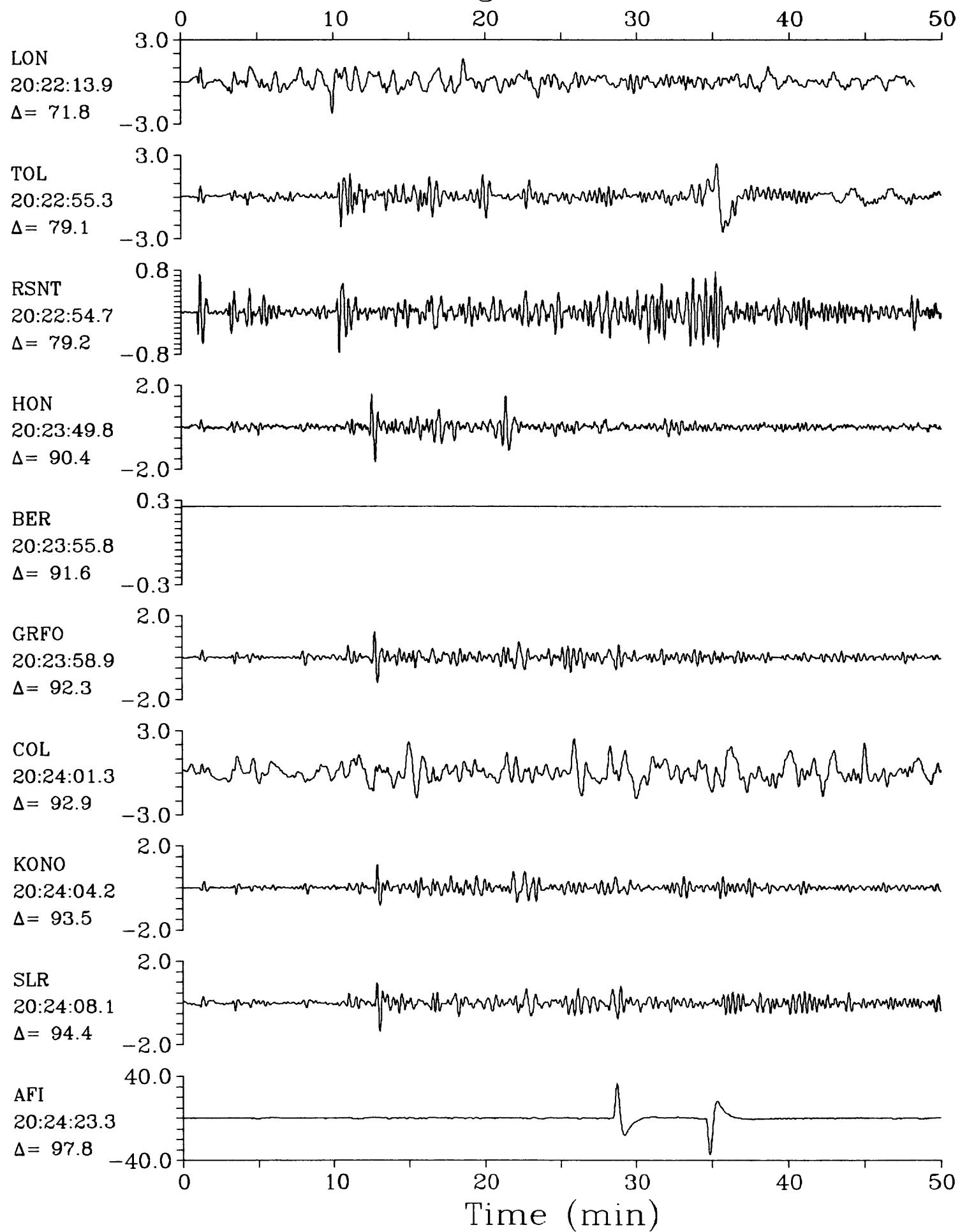


166 LPZ

02 June 1983 20:12:50.73

LPZ

Peru-Brazil Border Region h=598.6 MB=5.9

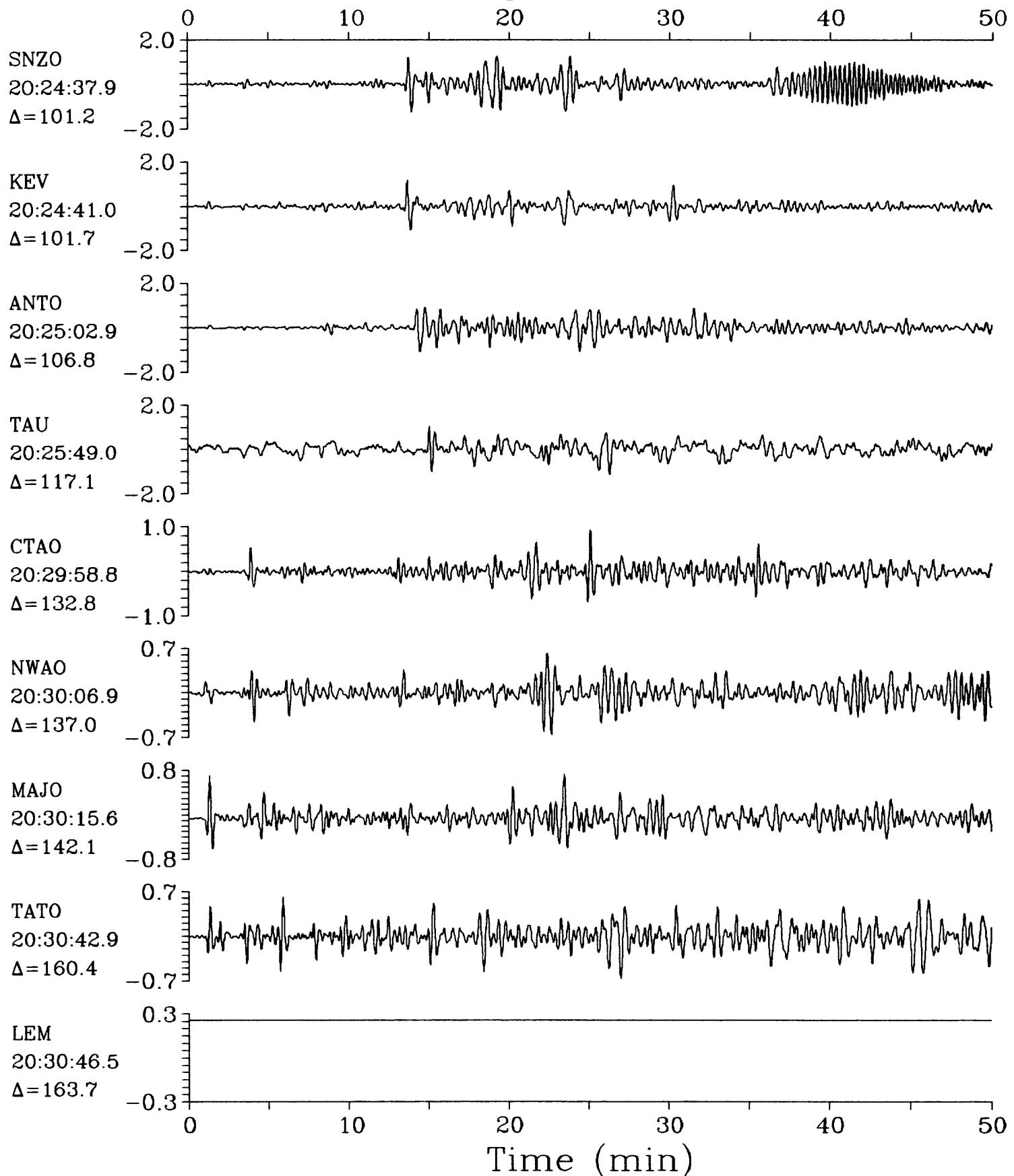


LPZ

02 June 1983 20:12:50.73

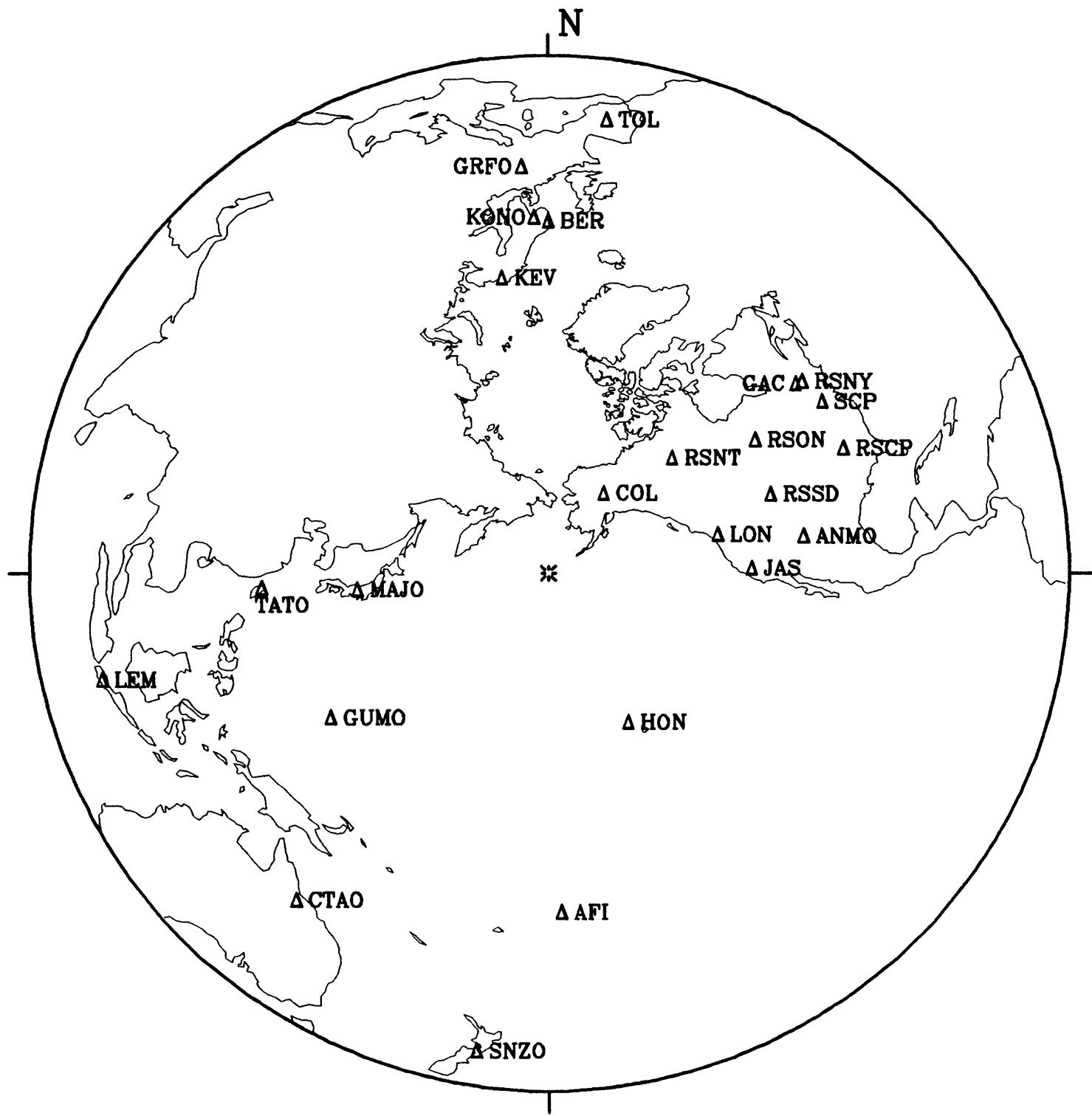
LPZ 167

Peru-Brazil Border Region h=598.6 MB=5.9



09 June 1983 18:46:00.90

Andreanof Islands, Aleutian Is.

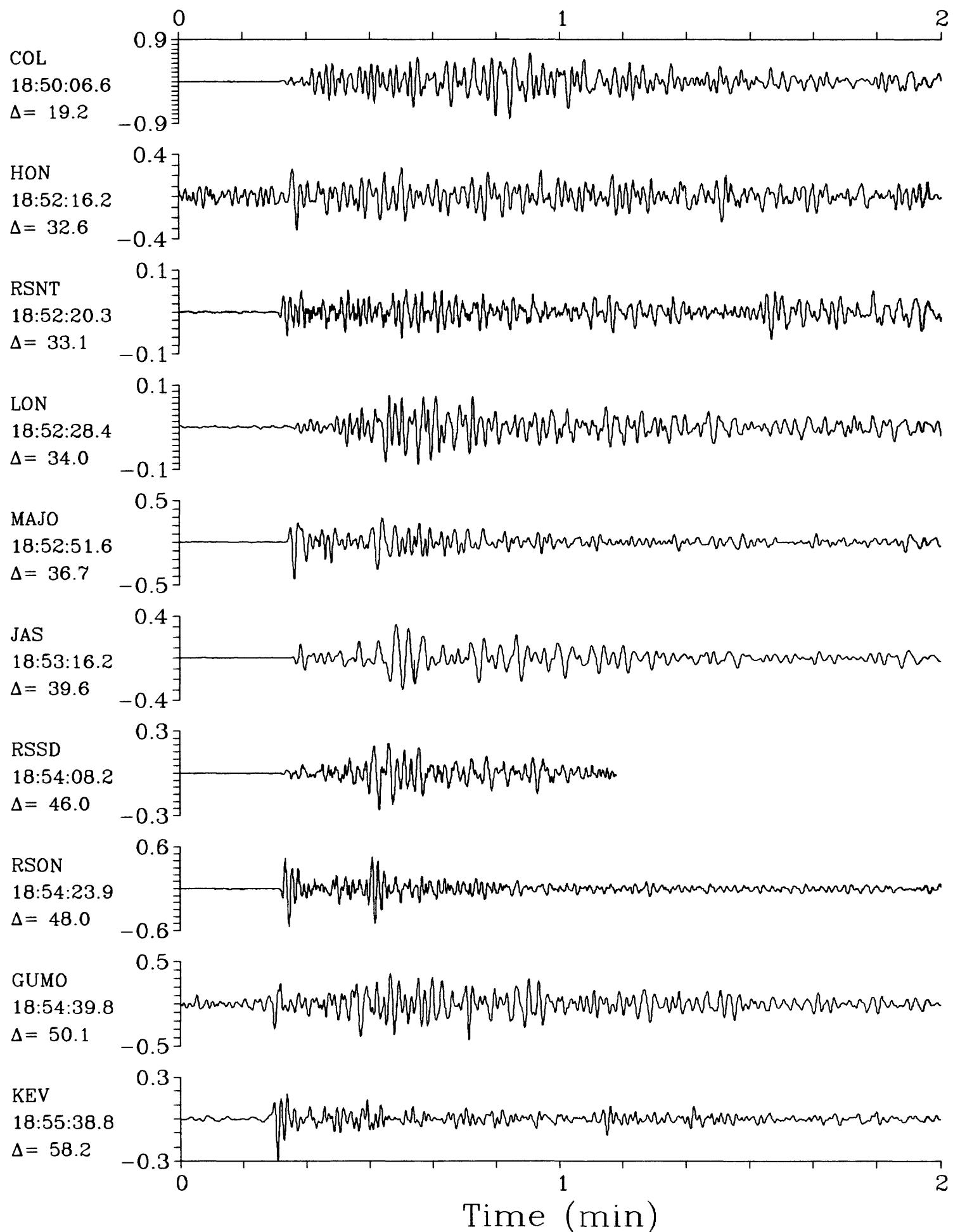


SPZ

09 June 1983 18:46:00.90

SPZ¹⁶⁹

Andreanof Islands, Aleutian Is. h=20.8 MB=6.2 ms=5.8

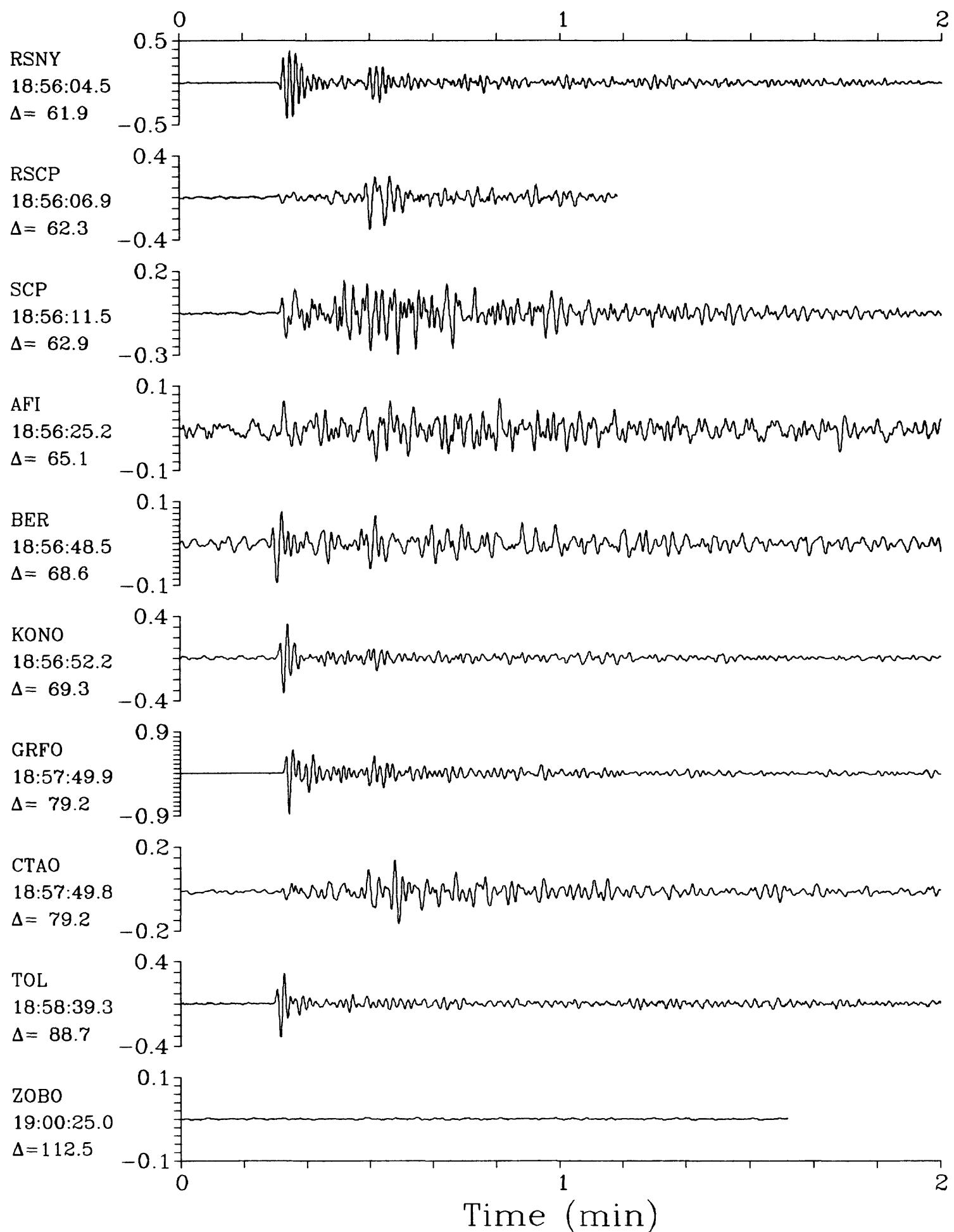


170 SPZ

09 June 1983 18:46:00.90

SPZ

Andreanof Islands, Aleutian Is. h=20.8 MB=6.2 ms=5.8

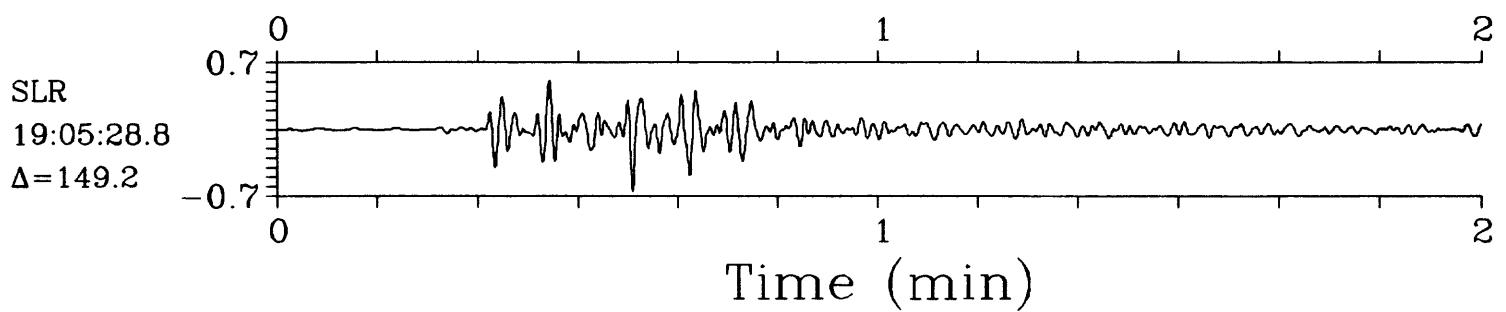


SPZ

09 June 1983 18:46:00.90

SPZ¹⁷¹

Andreanof Islands, Aleutian Is. h=20.8 MB=6.2 ms=5.8

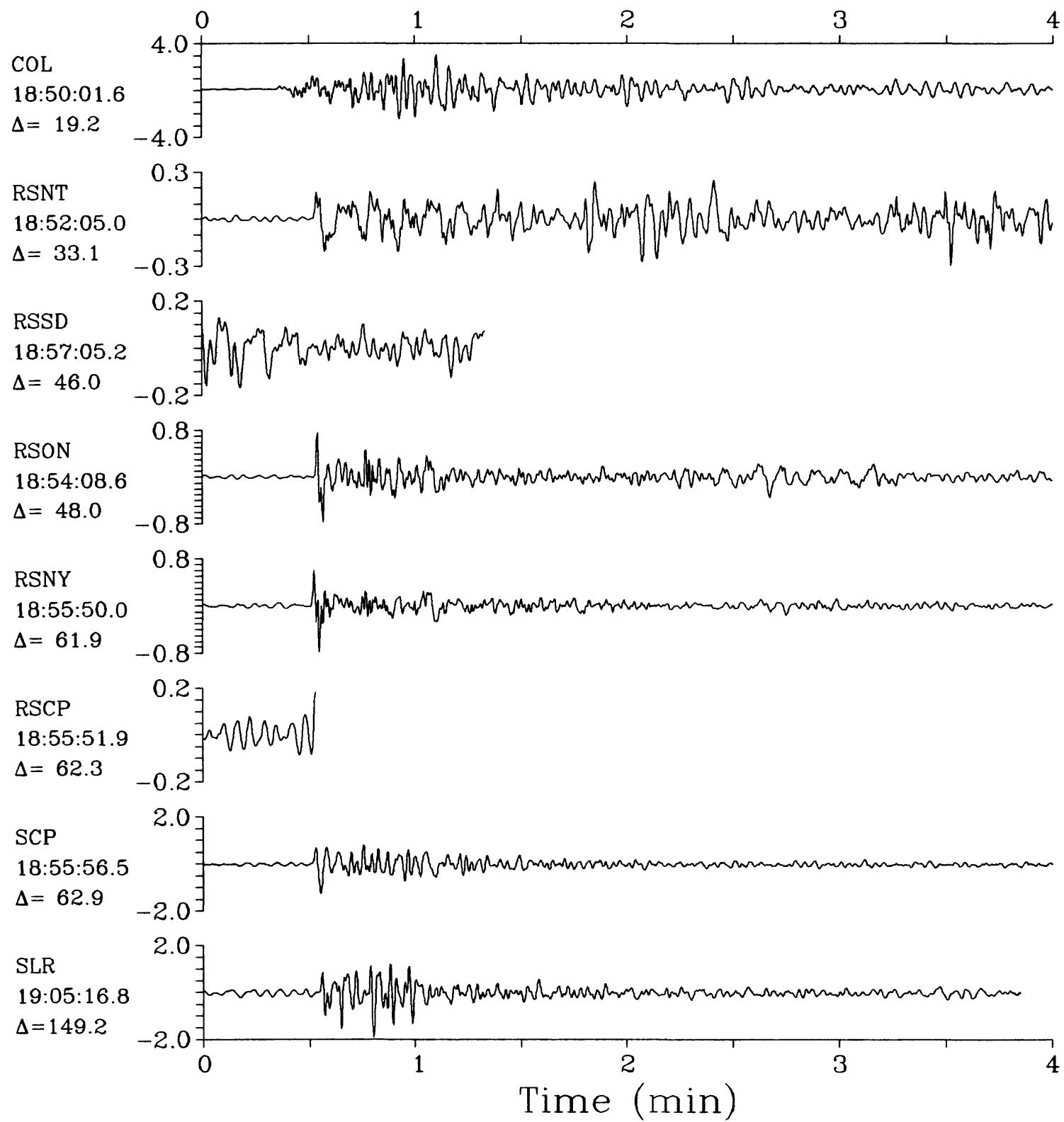


172 IPZ

09 June 1983 18:46:00.90

IPZ

Andreanof Islands, Aleutian Is. h=20.8 MB=6.2 ms=5.8

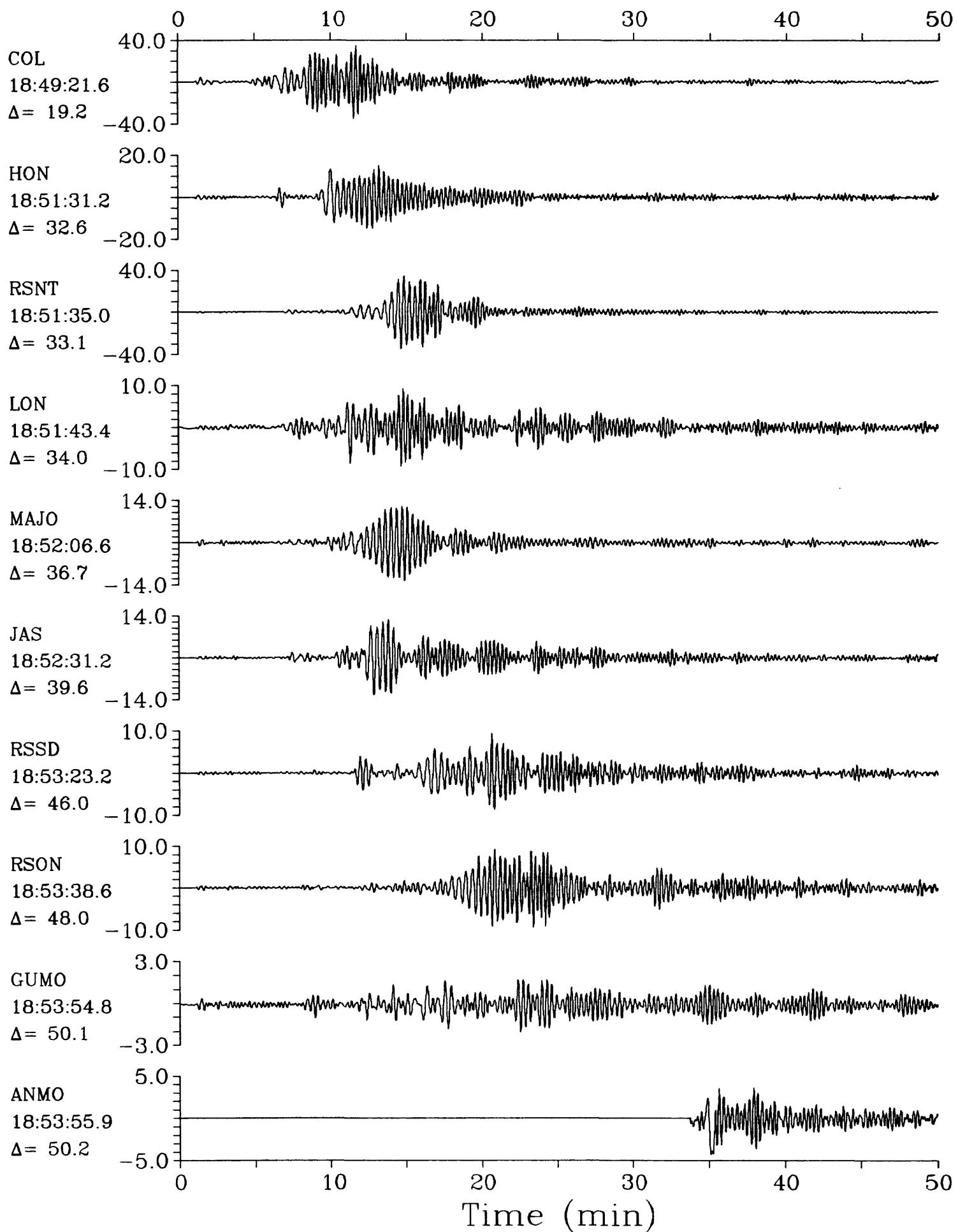


LPZ

09 June 1983 18:46:00.90

LPZ 173

Andreanof Islands, Aleutian Is. h=20.8 MB=6.2 ms=5.8

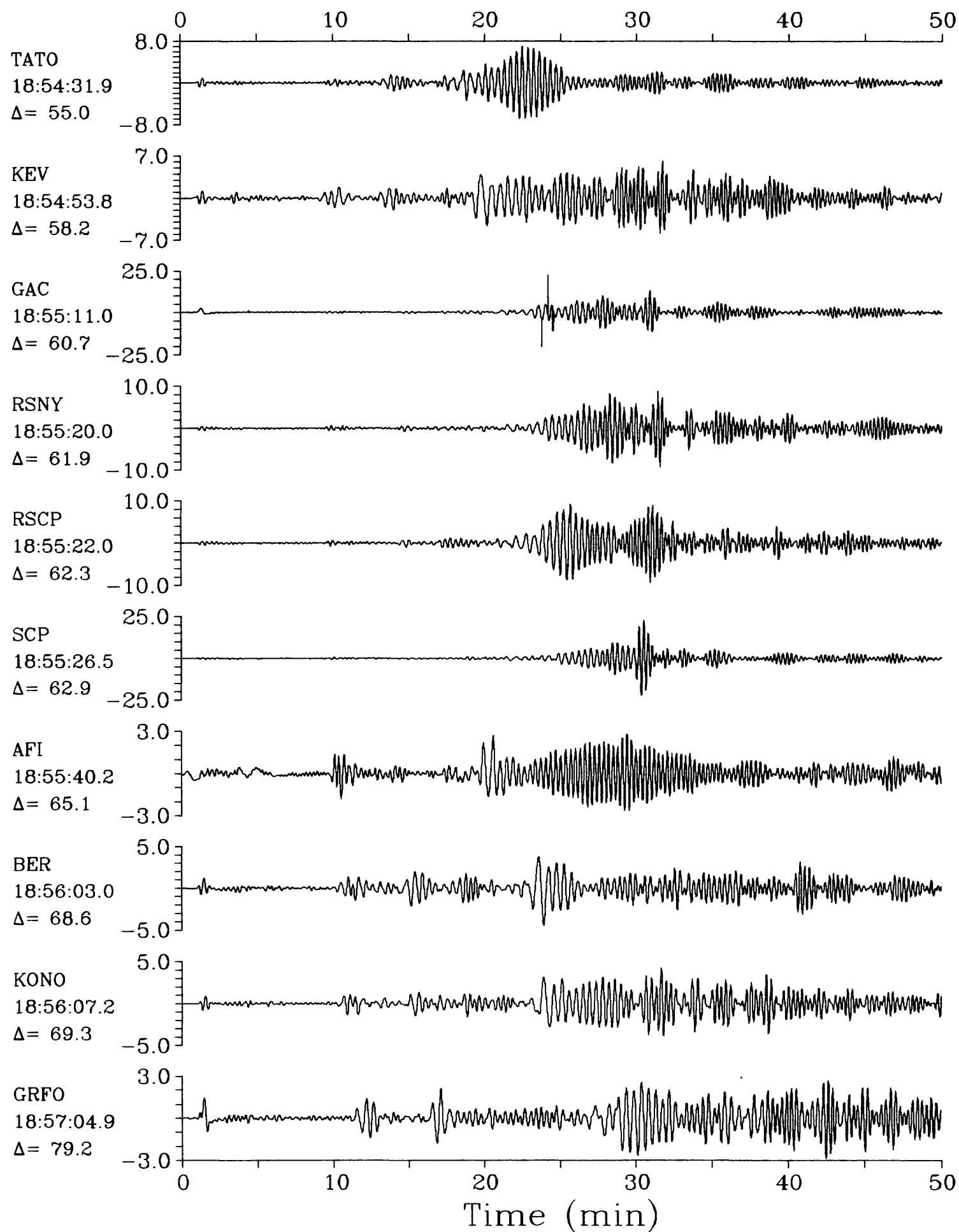


174 LPZ

09 June 1983 18:46:00.90

LPZ

Andreanof Islands, Aleutian Is. h=20.8 MB=6.2 ms=5.8

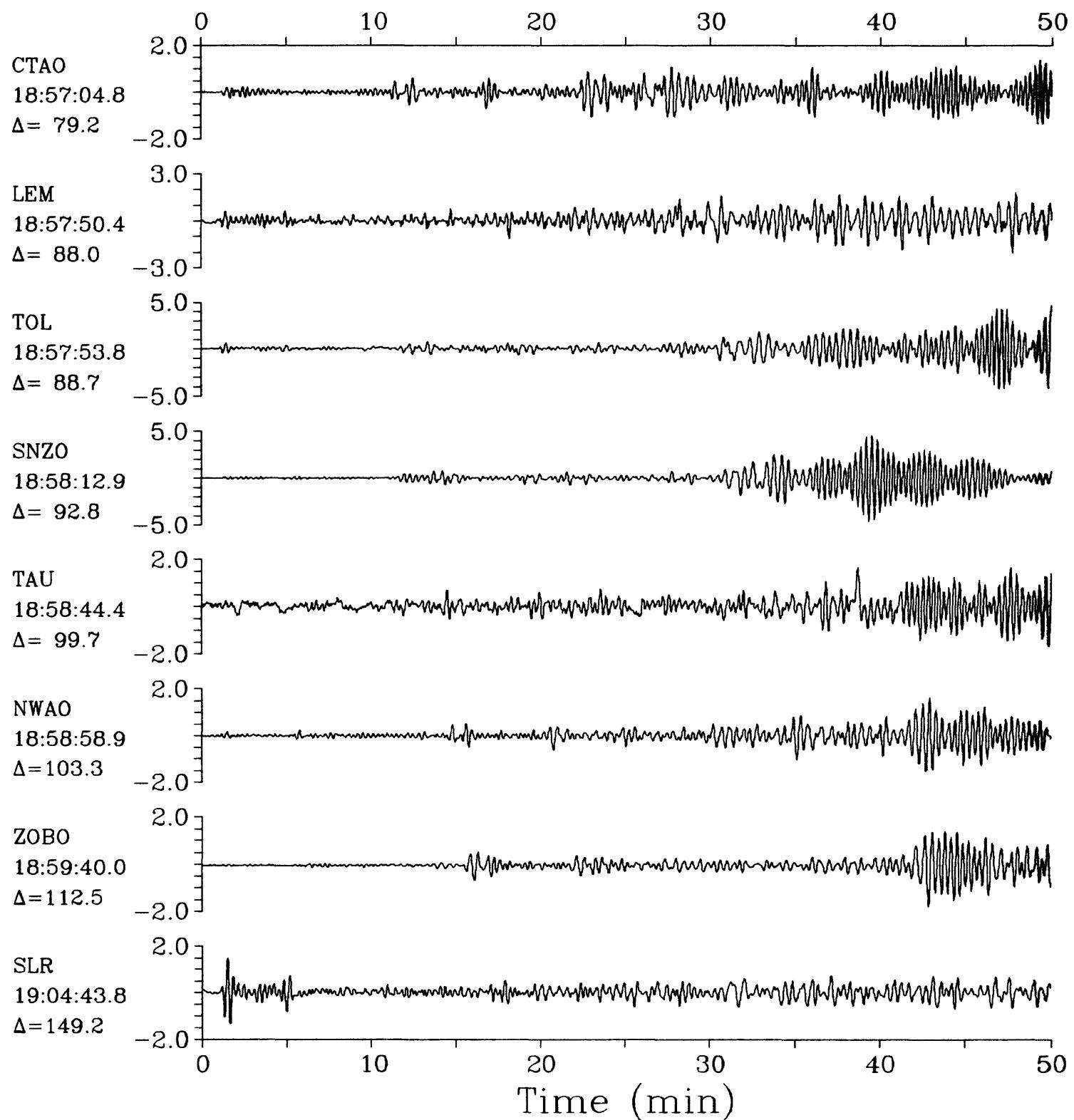


LPZ

09 June 1983 18:46:00.90

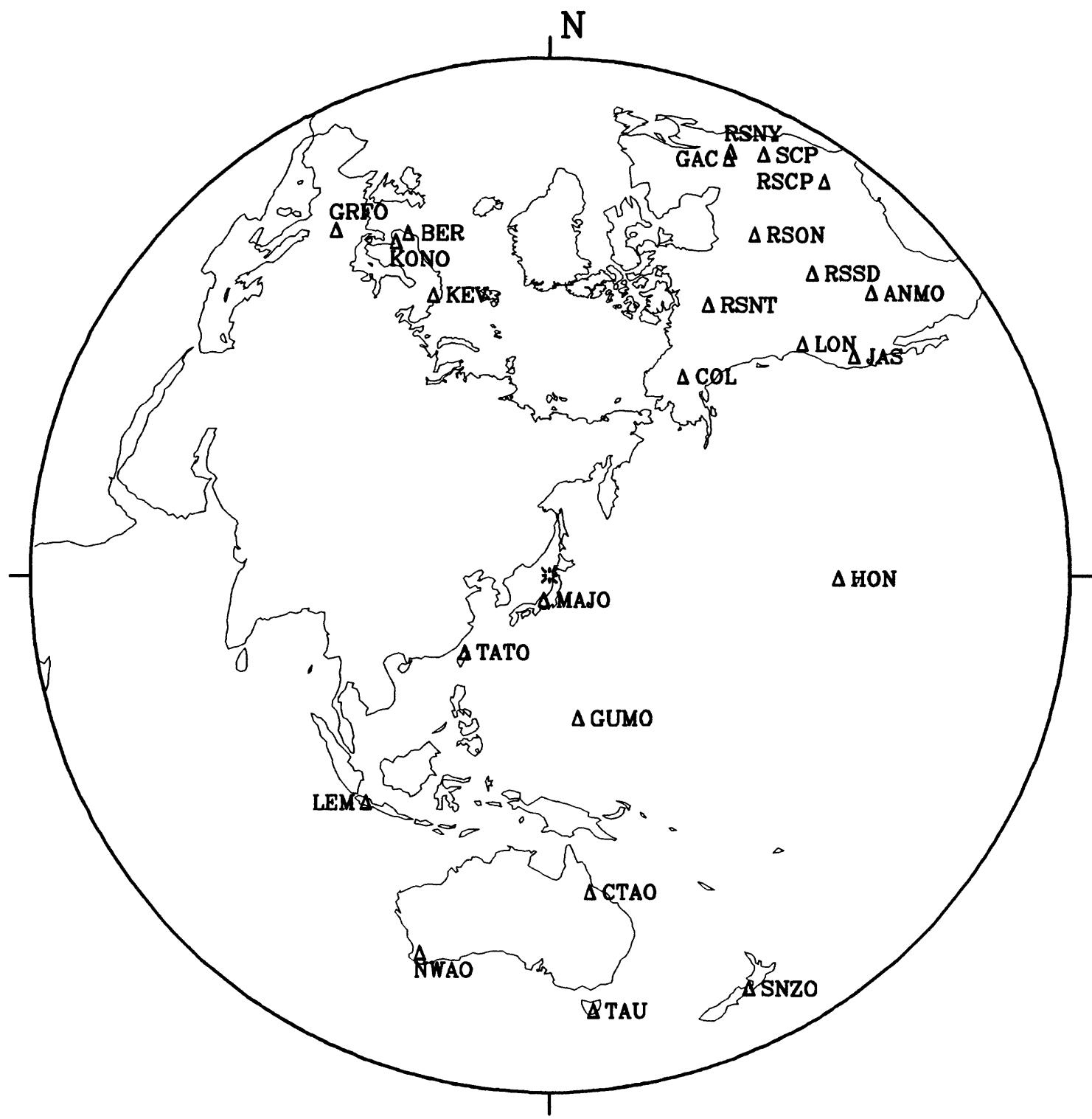
LPZ 175

Andreanof Islands, Aleutian Is. h=20.8 MB=6.2 ms=5.8



21 June 1983 06:25:27.35

Hokkaido, Japan Region

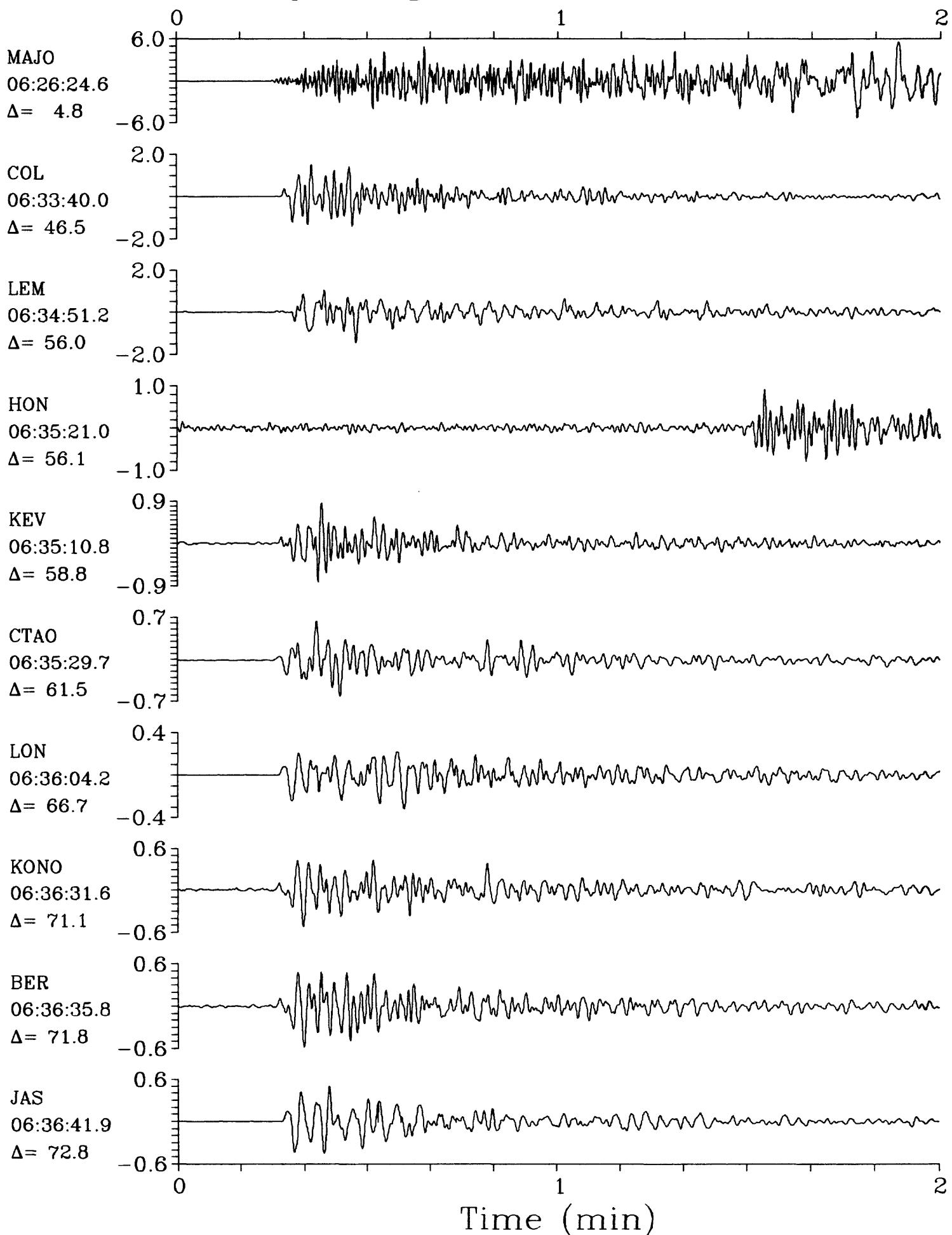


SPZ

21 June 1983 06:25:27.35

SPZ¹⁷⁷

Hokkaido, Japan Region h = 9.9 MB=6.7 ms=6.9

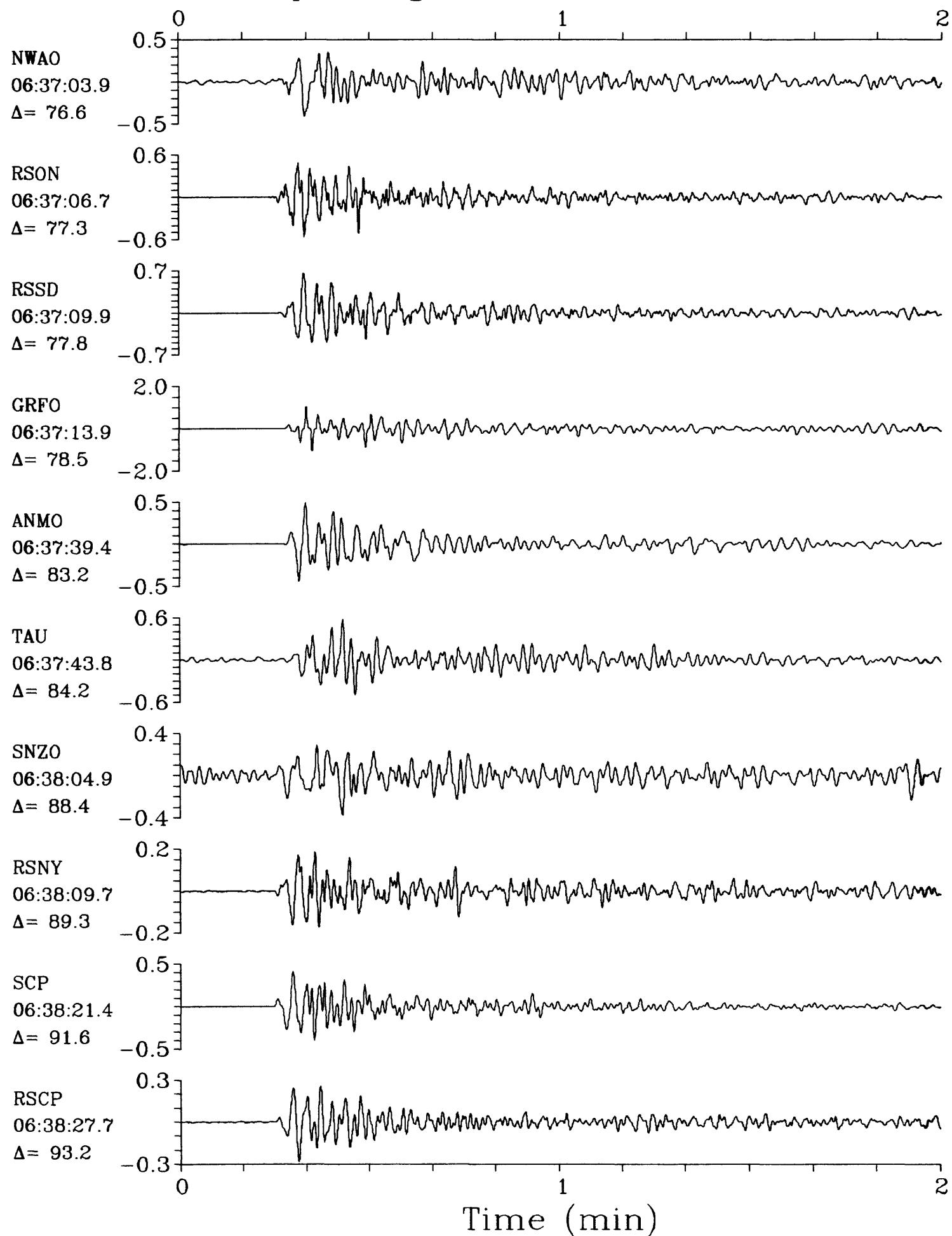


178 SPZ

21 June 1983 06:25:27.35

SPZ

Hokkaido, Japan Region h= 9.9 MB=6.7 ms=6.9

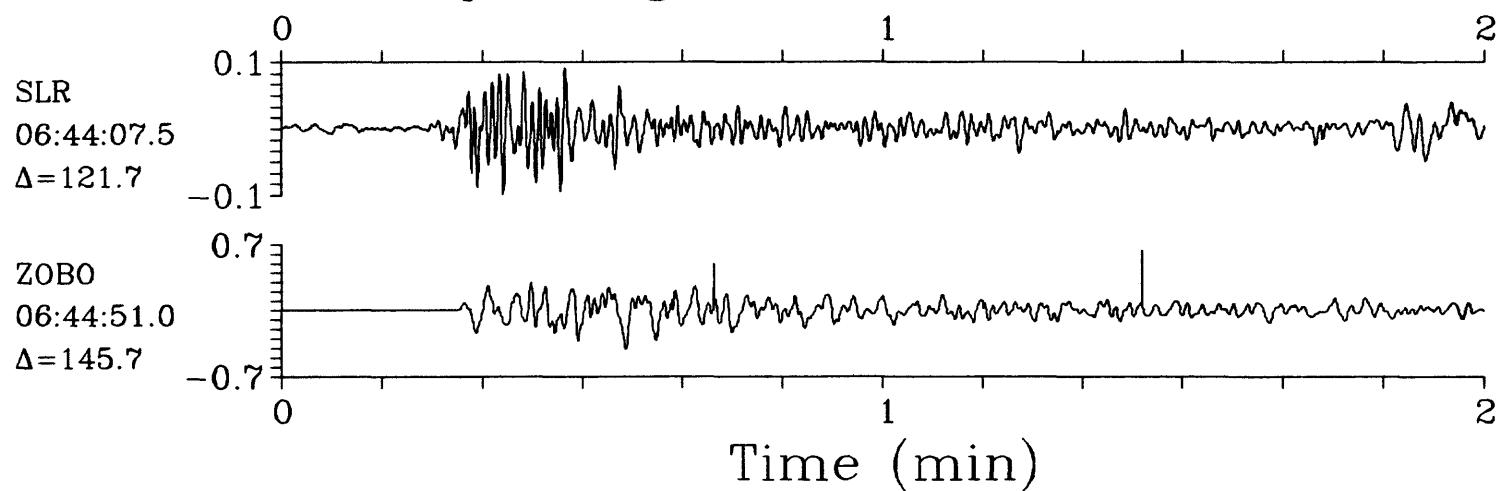


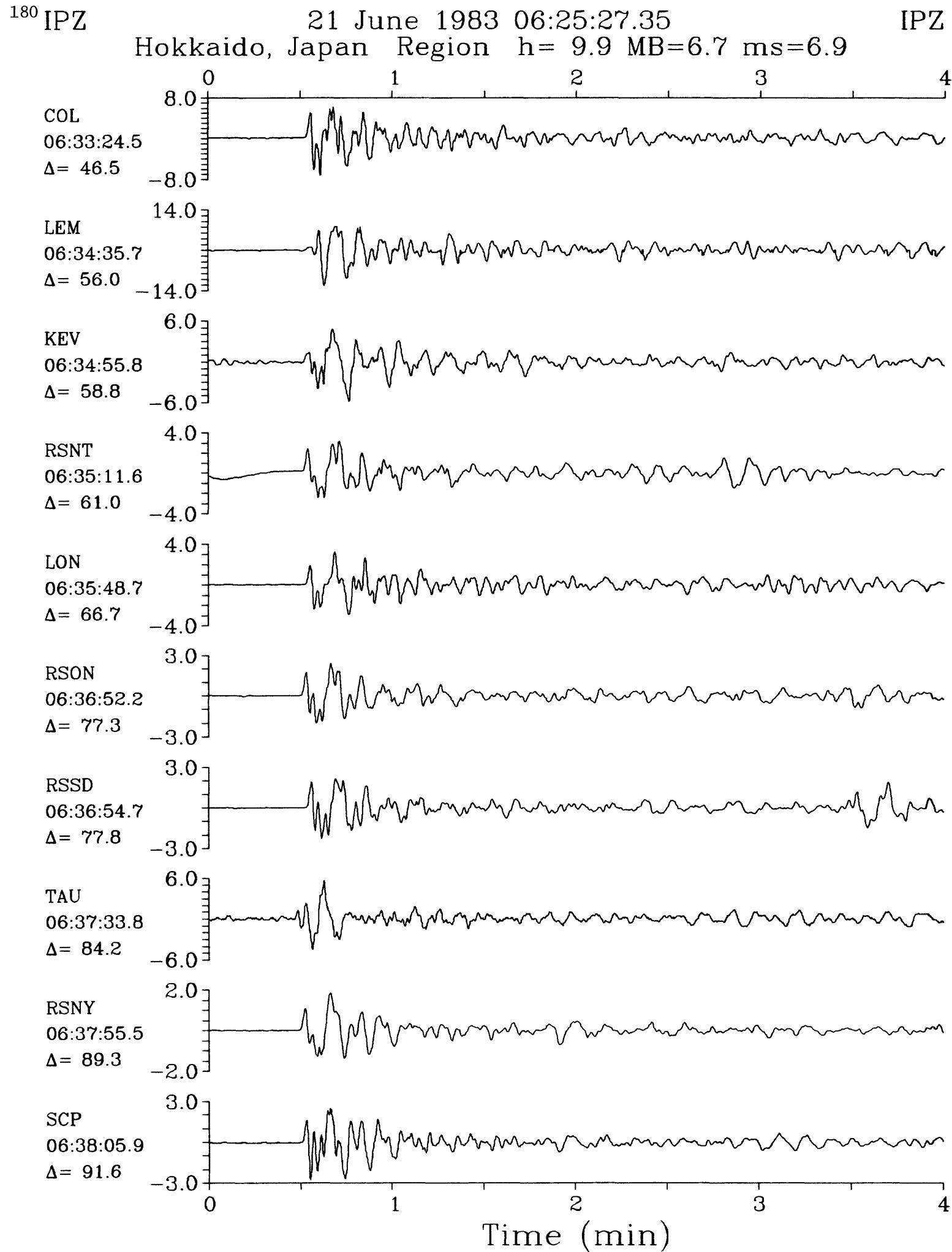
SPZ

21 June 1983 06:25:27.35

SPZ¹⁷⁹

Hokkaido, Japan Region h= 9.9 MB=6.7 ms=6.9



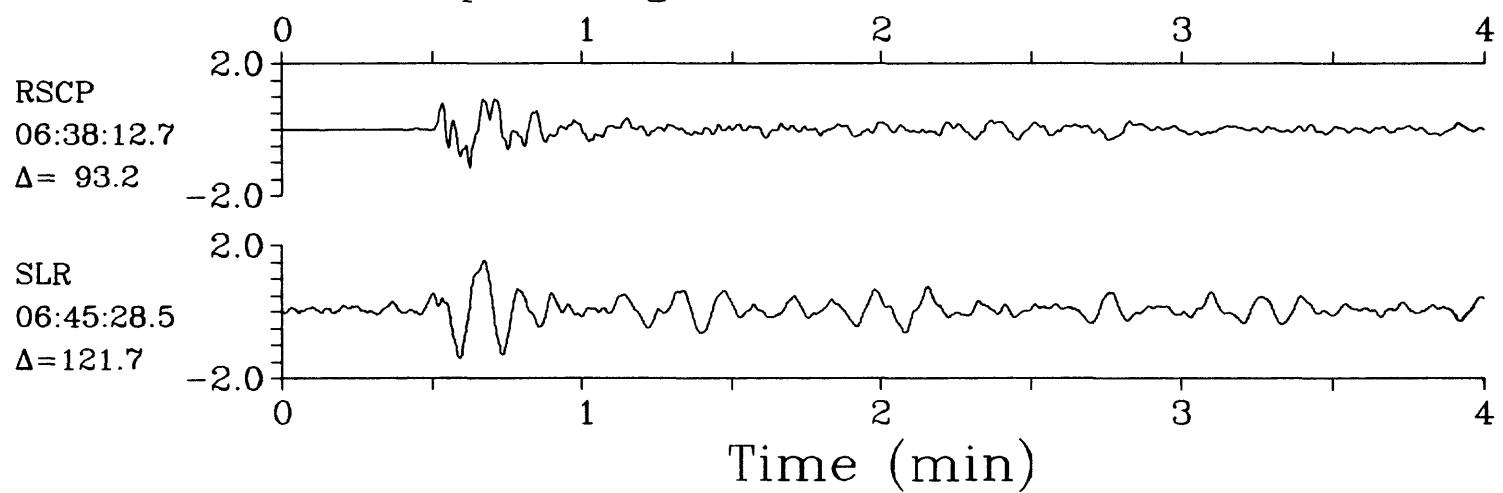


IPZ

21 June 1983 06:25:27.35

IPZ¹⁸¹

Hokkaido, Japan Region h= 9.9 MB=6.7 ms=6.9

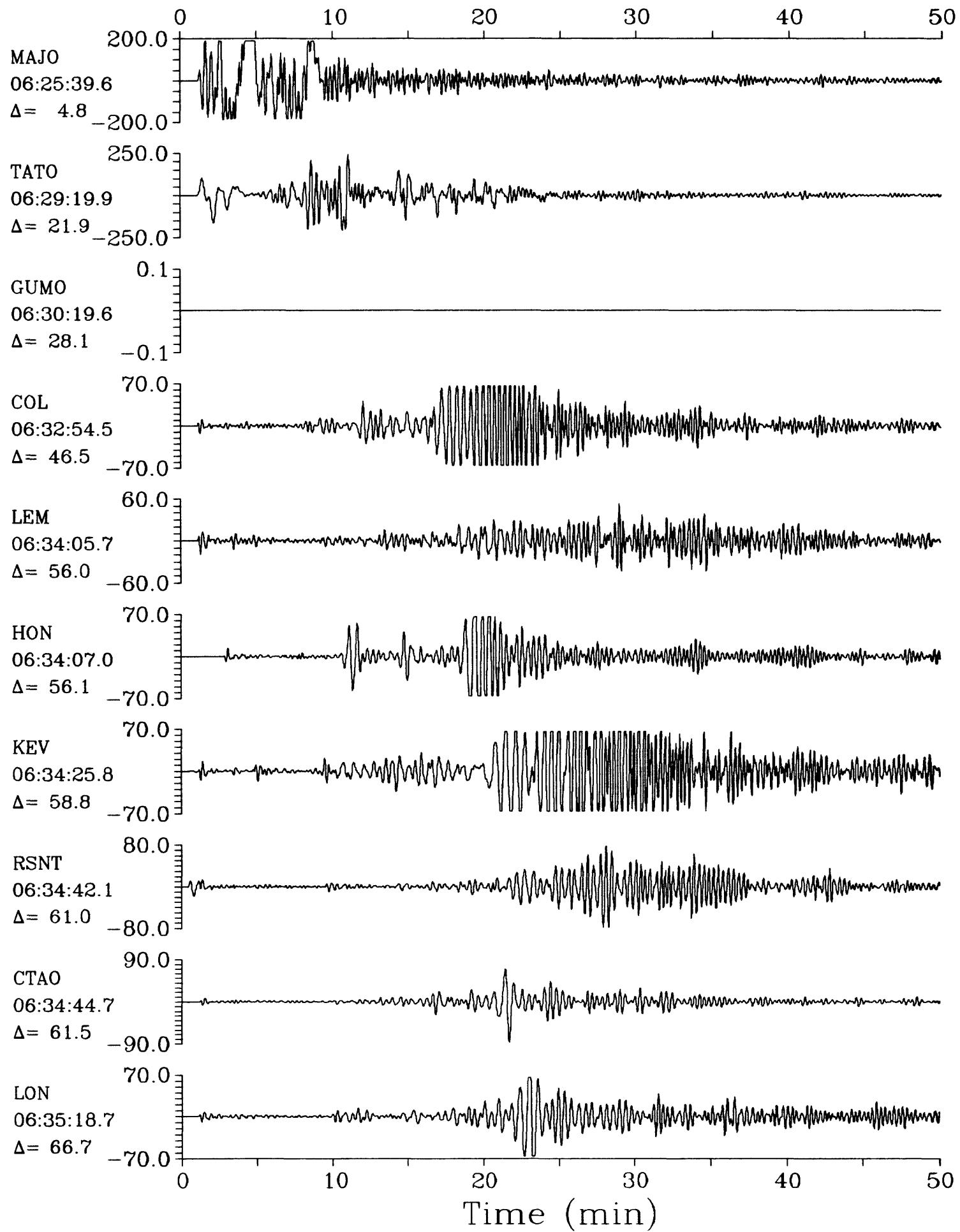


¹⁸²LPZ

21 June 1983 06:25:27.35

LPZ

Hokkaido, Japan Region h= 9.9 MB=6.7 ms=6.9

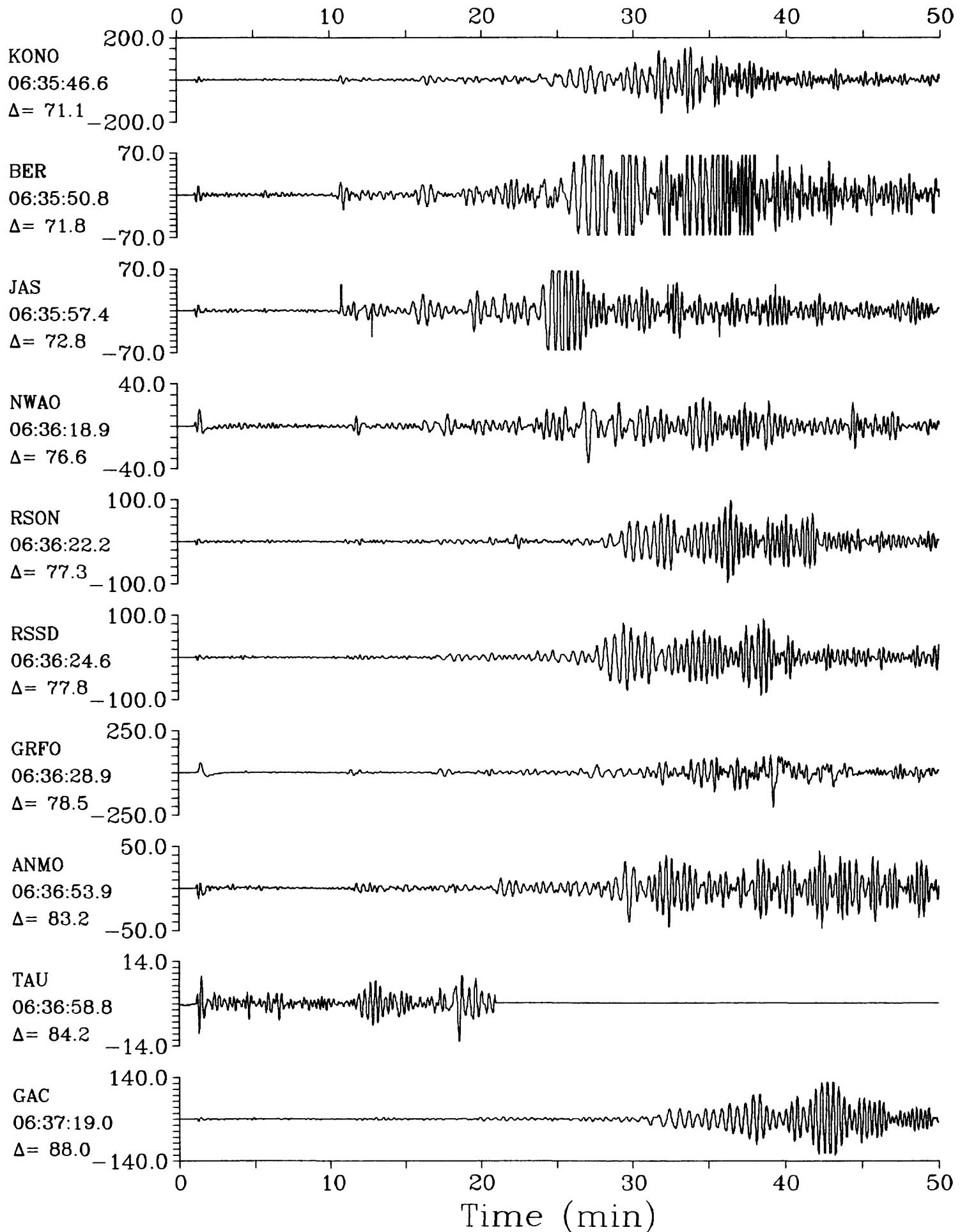


LPZ

21 June 1983 06:25:27.35

LPZ¹⁸³

Hokkaido, Japan Region h= 9.9 MB=6.7 ms=6.9

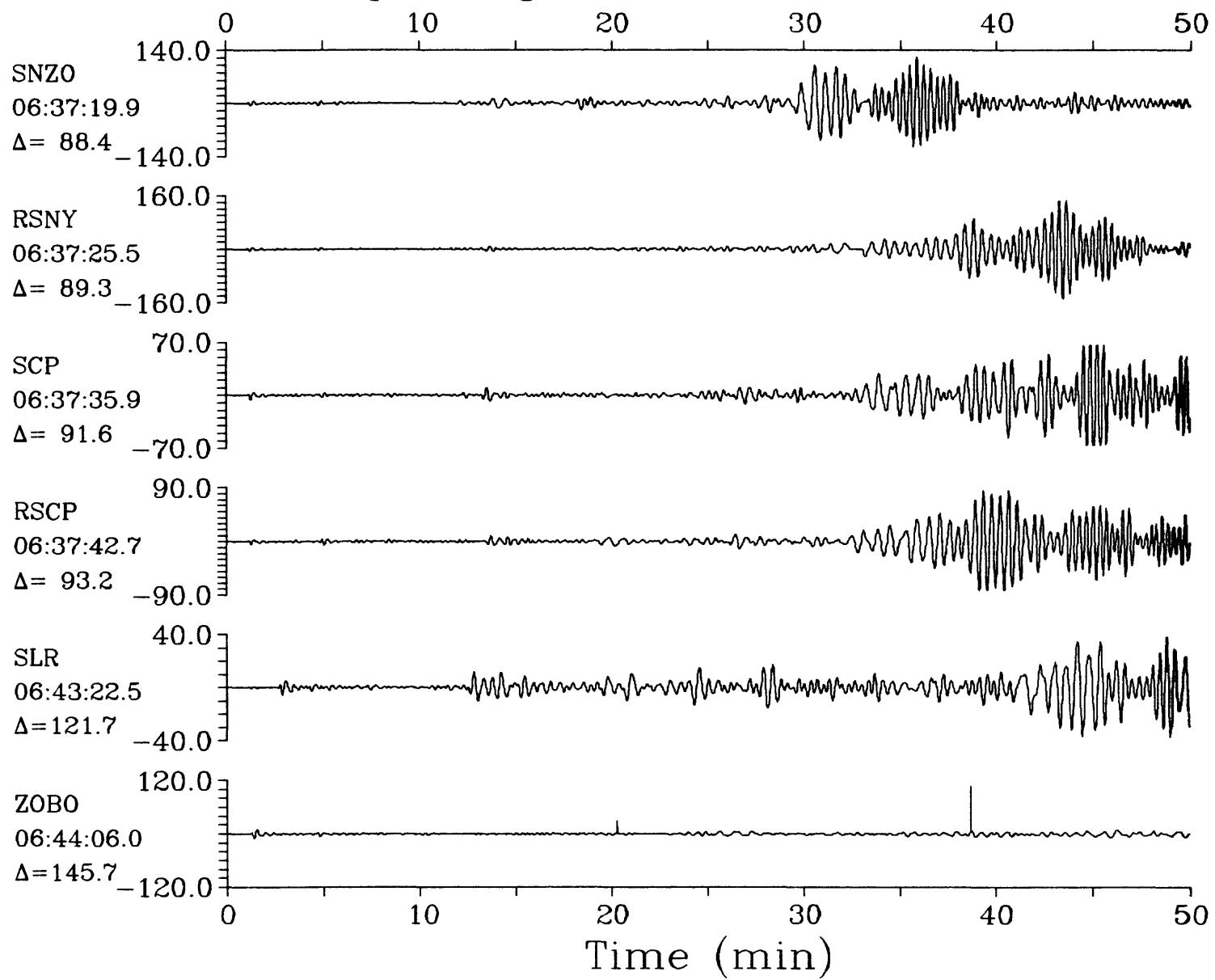


¹⁸⁴LPZ

21 June 1983 06:25:27.35

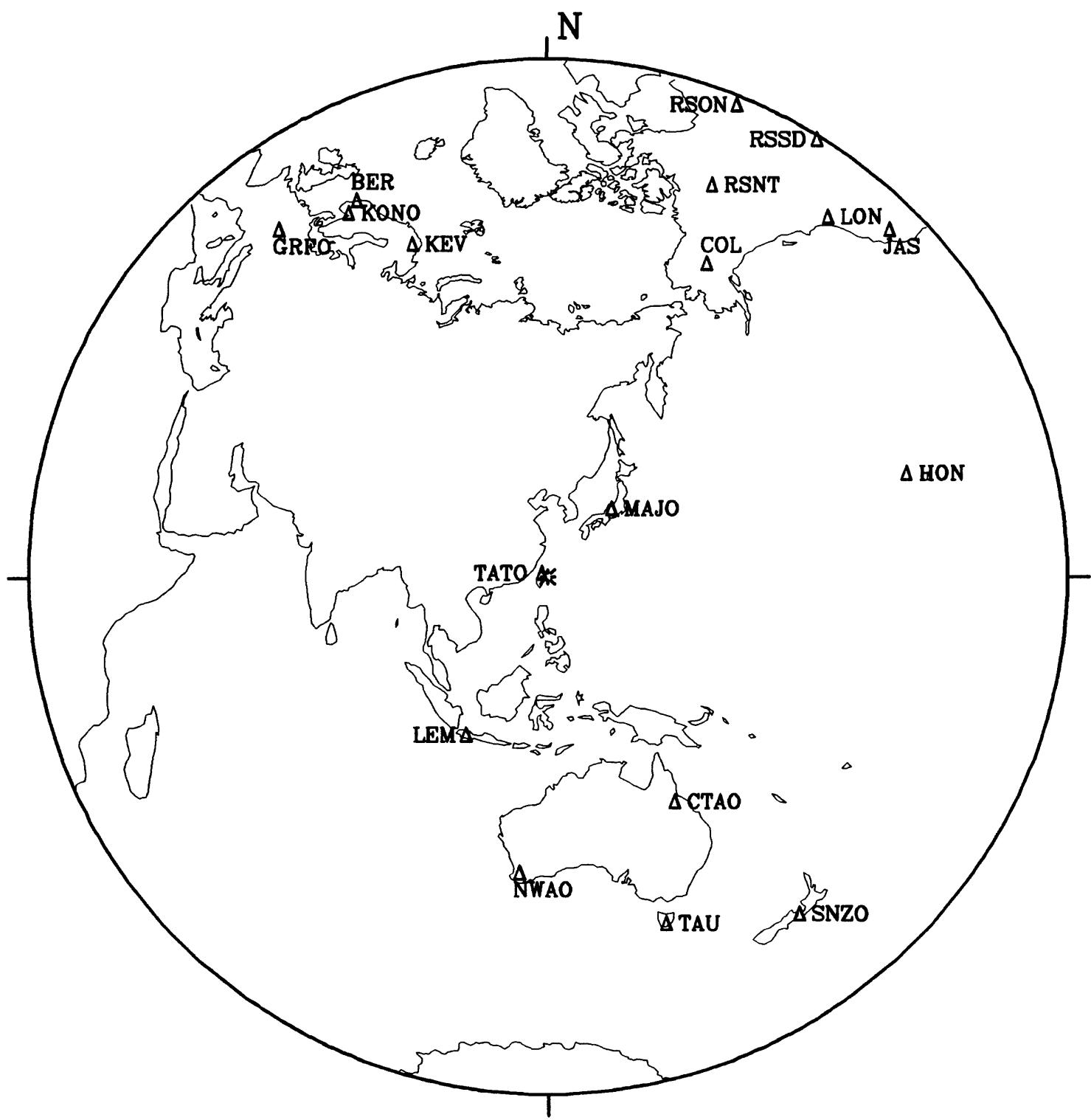
LPZ

Hokkaido, Japan Region h= 9.9 MB=6.7 ms=6.9



24 June 1983 09:06:45.80

Taiwan Region

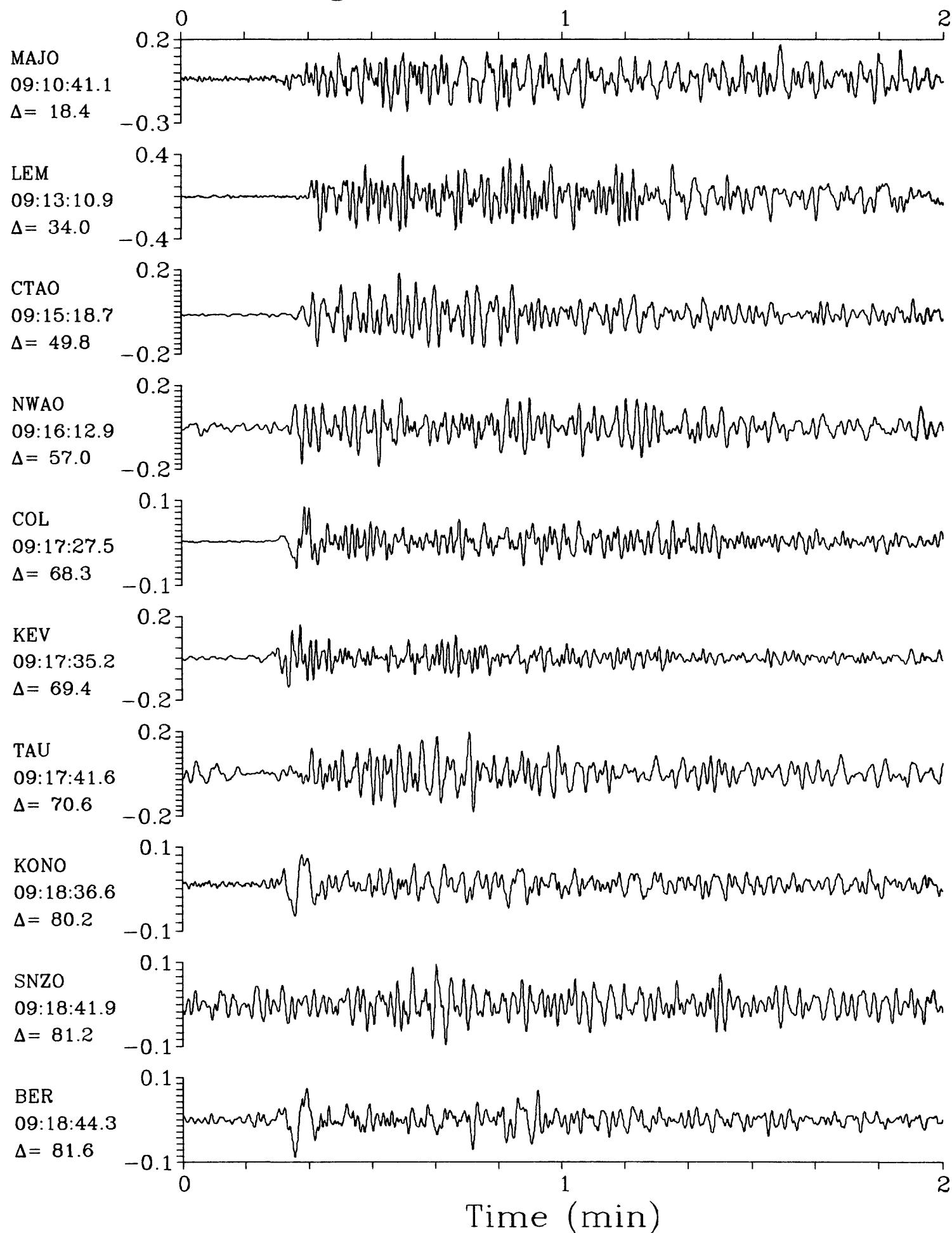


¹⁸⁶SPZ

24 June 1983 09:06:45.80

SPZ

Taiwan Region h=44.1 MB=6.1 ms=6.7

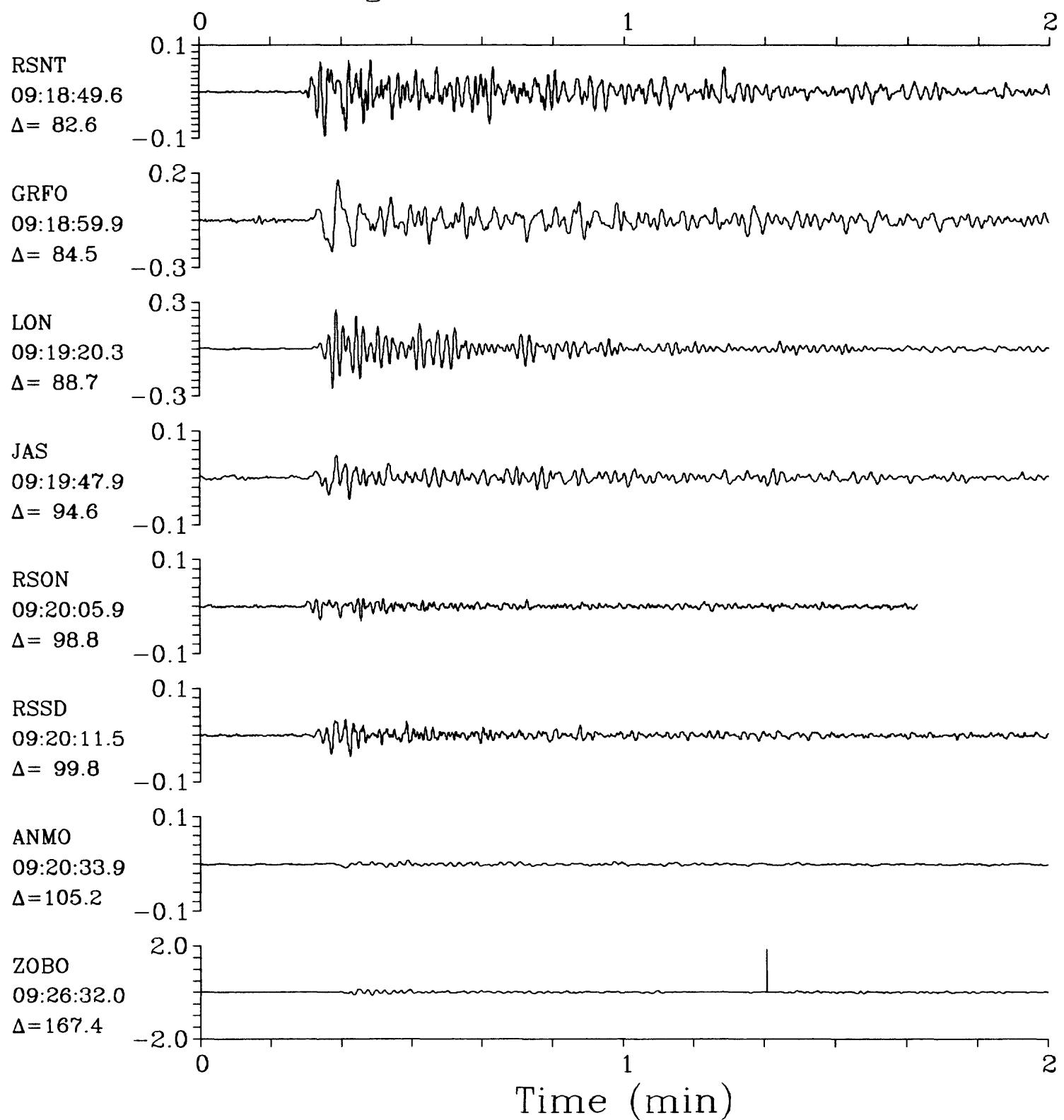


SPZ

24 June 1983 09:06:45.80

SPZ¹⁸⁷

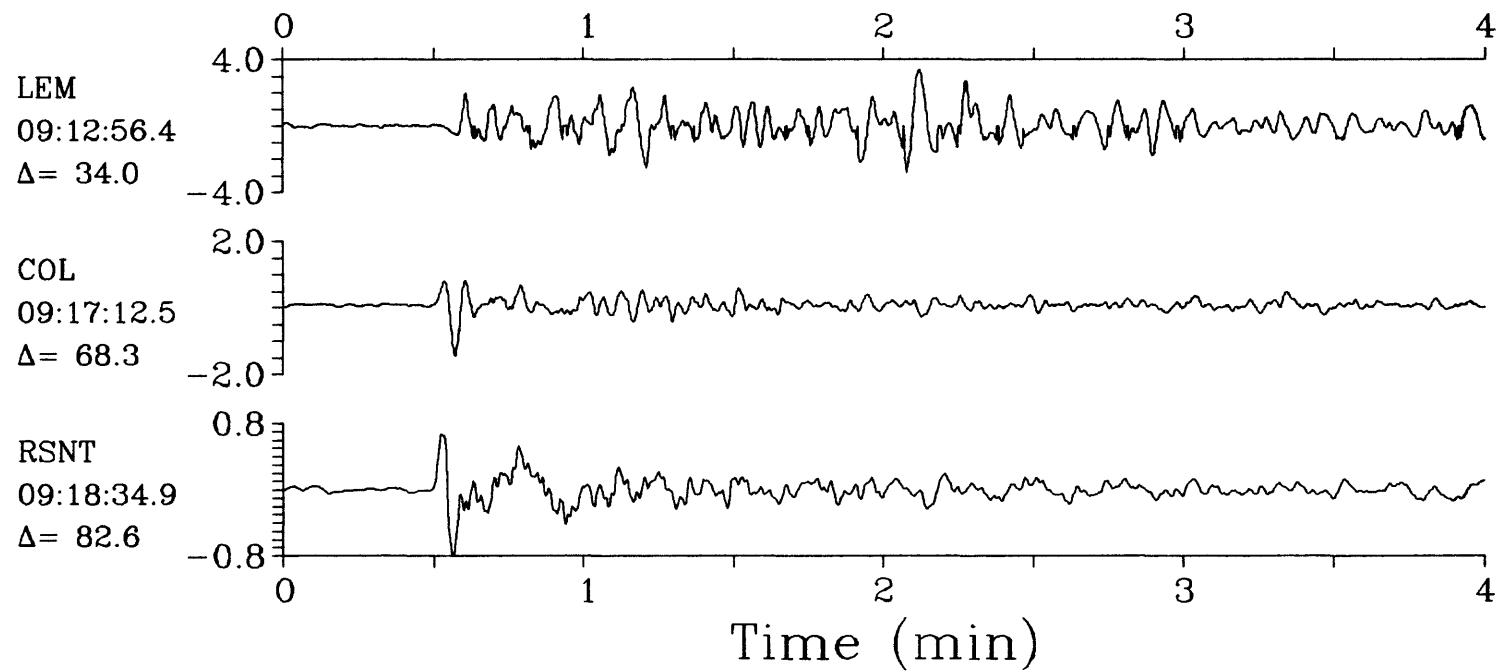
Taiwan Region h=44.1 MB=6.1 ms=6.7



¹⁸⁸IPZ

24 June 1983 09:06:45.80
Taiwan Region h=44.1 MB=6.1 ms=6.7

IPZ

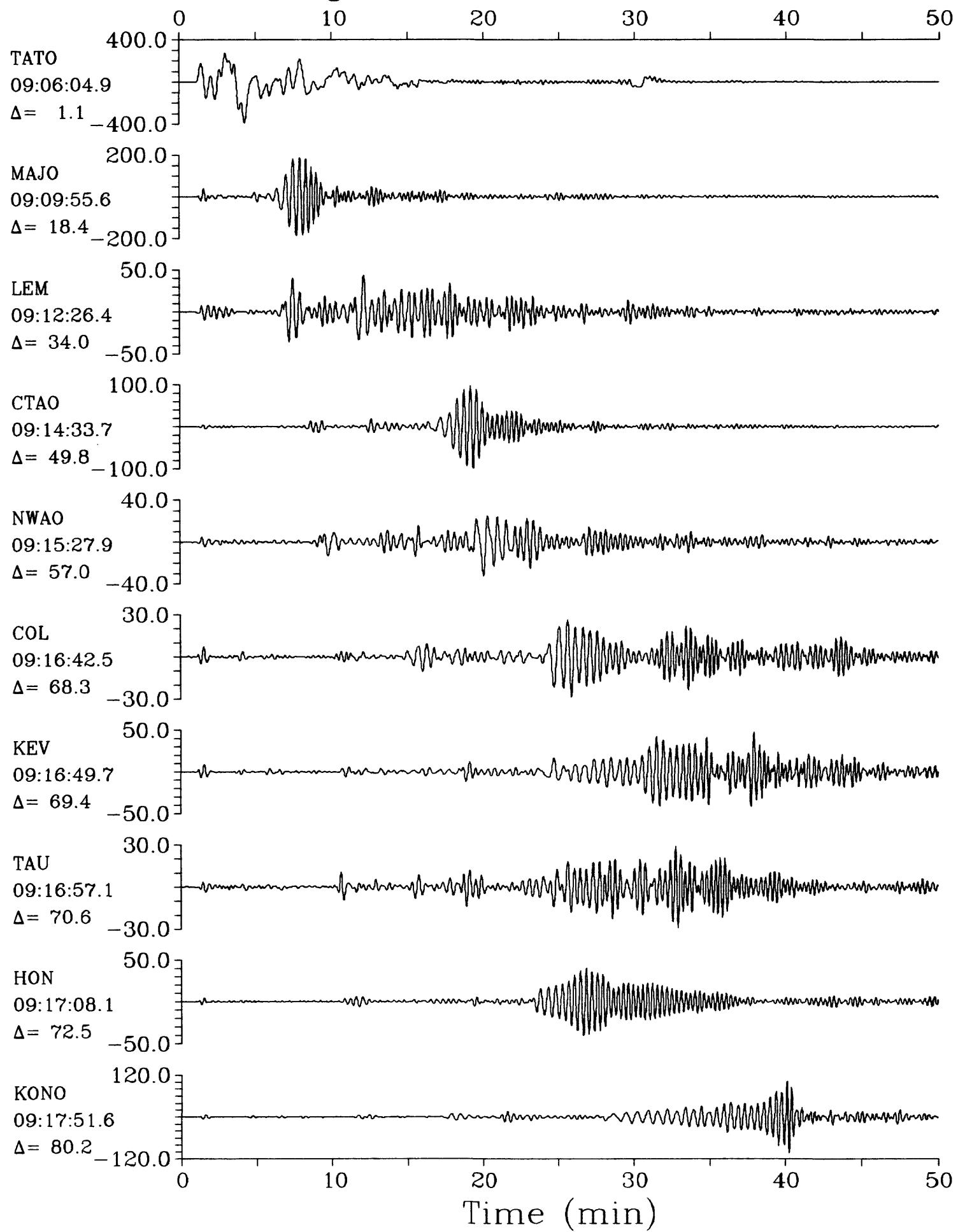


LPZ

24 June 1983 09:06:45.80

LPZ¹⁸⁹

Taiwan Region h=44.1 MB=6.1 ms=6.7

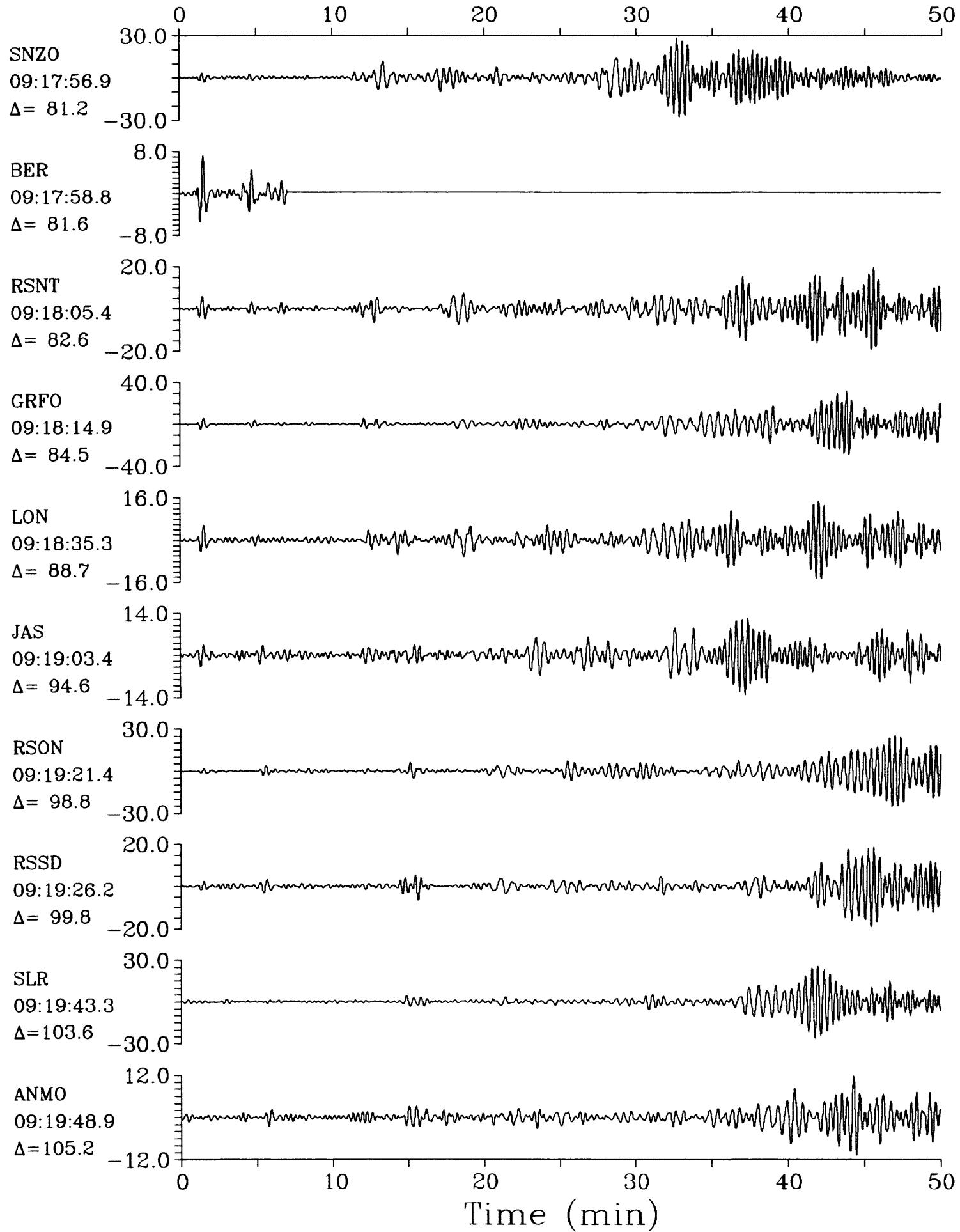


190 LPZ

24 June 1983 09:06:45.80

LPZ

Taiwan Region h=44.1 MB=6.1 ms=6.7

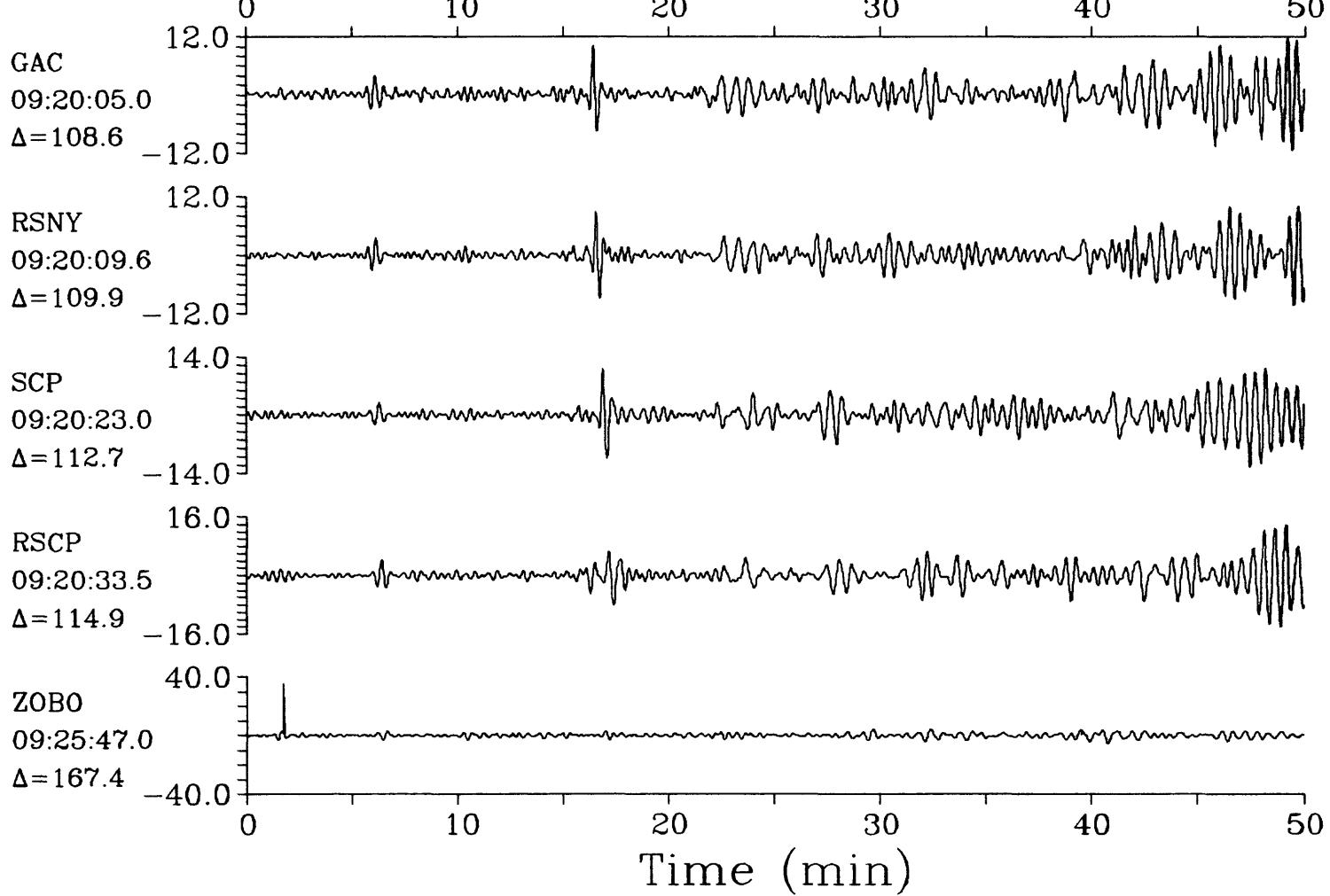


LPZ

24 June 1983 09:06:45.80

LPZ¹⁹¹

Taiwan Region h=44.1 MB=6.1 ms=6.7



12 July 1983 15:10:03.40

Southern Alaska

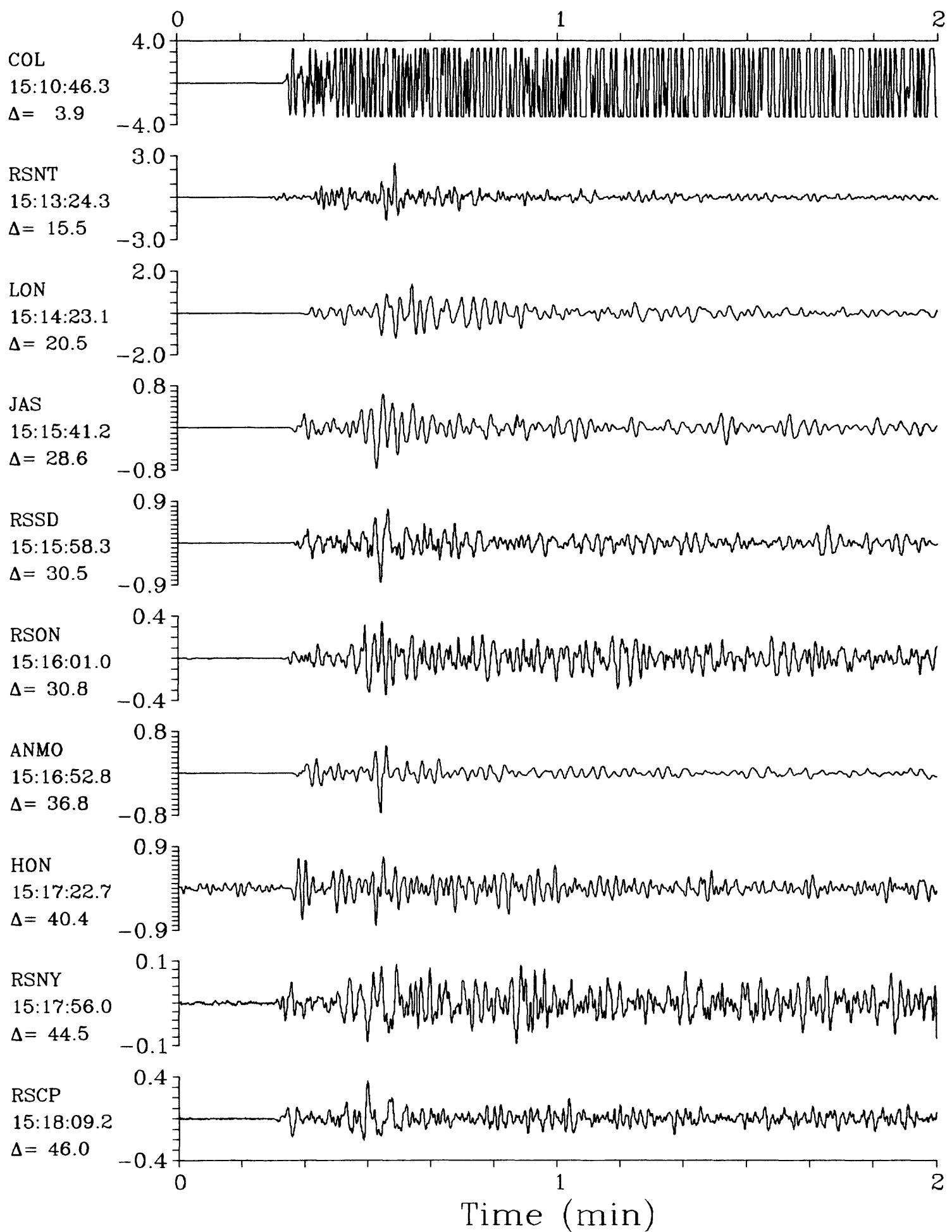


SPZ

12 July 1983 15:10:03.40

SPZ¹⁹⁸³

Southern Alaska h=37.0 MB=6.1 ms=6.4

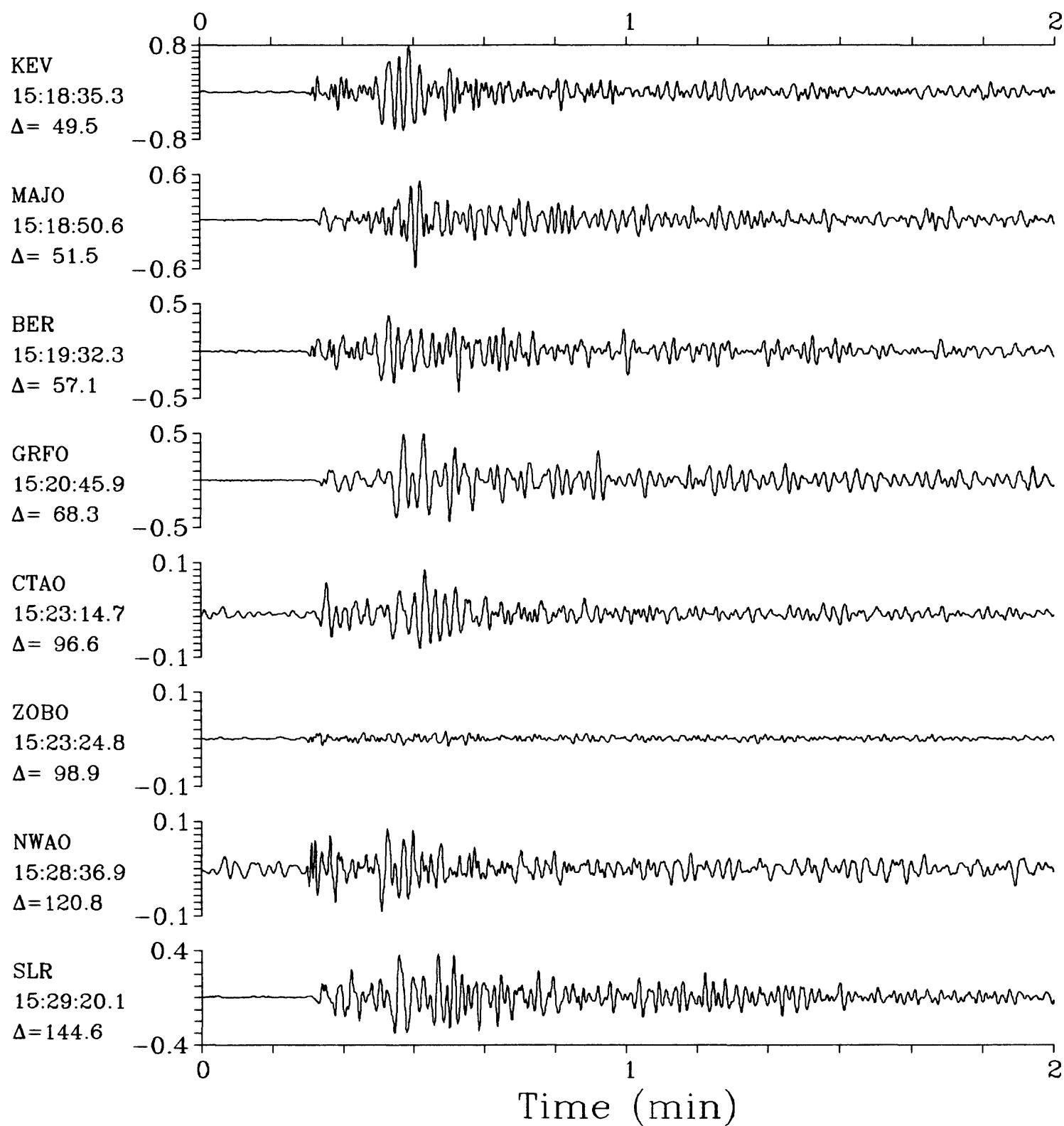


194 SPZ

12 July 1983 15:10:03.40

SPZ

Southern Alaska h=37.0 MB=6.1 ms=6.4

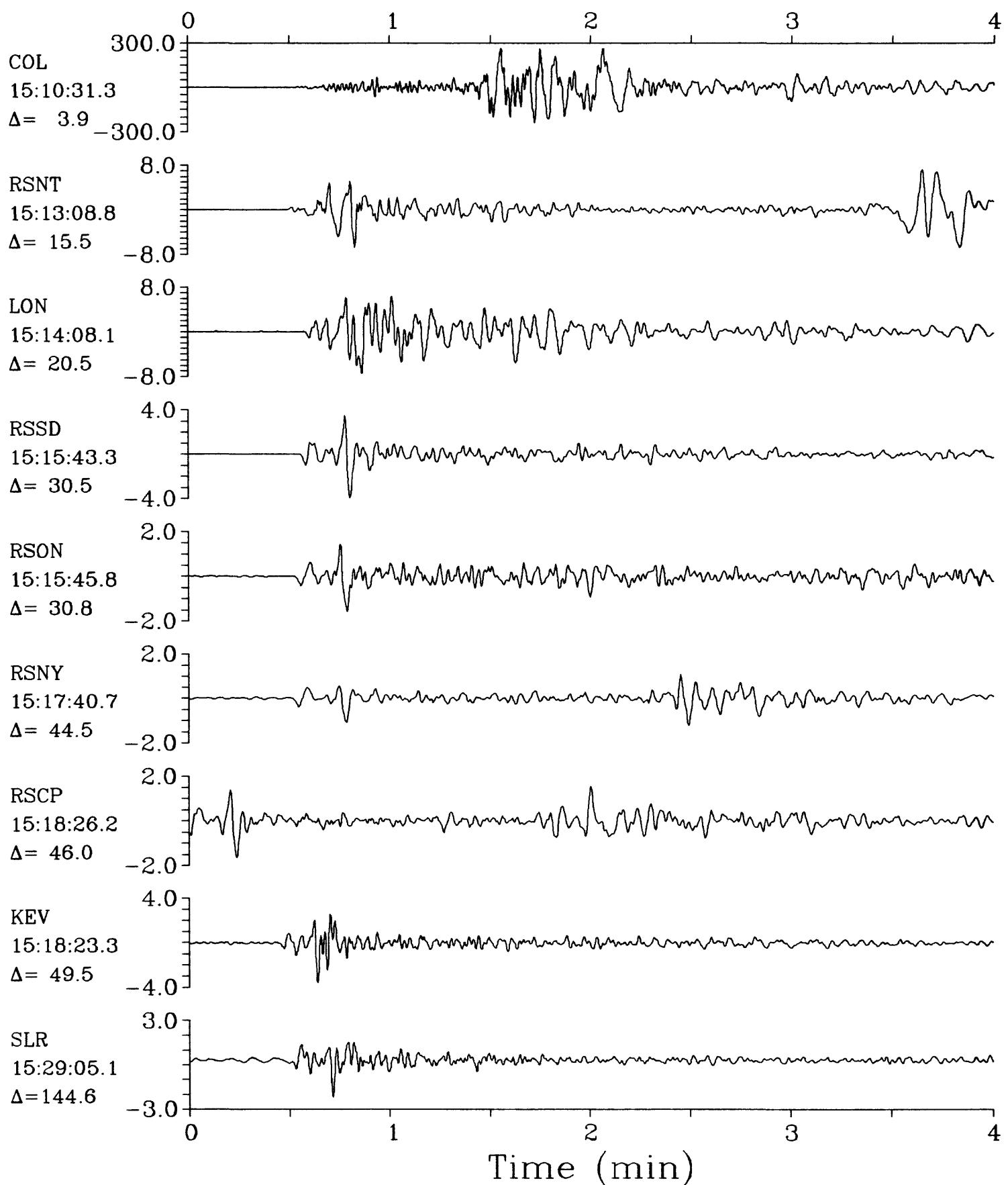


IPZ

12 July 1983 15:10:03.40

IPZ 195

Southern Alaska h=37.0 MB=6.1 ms=6.4

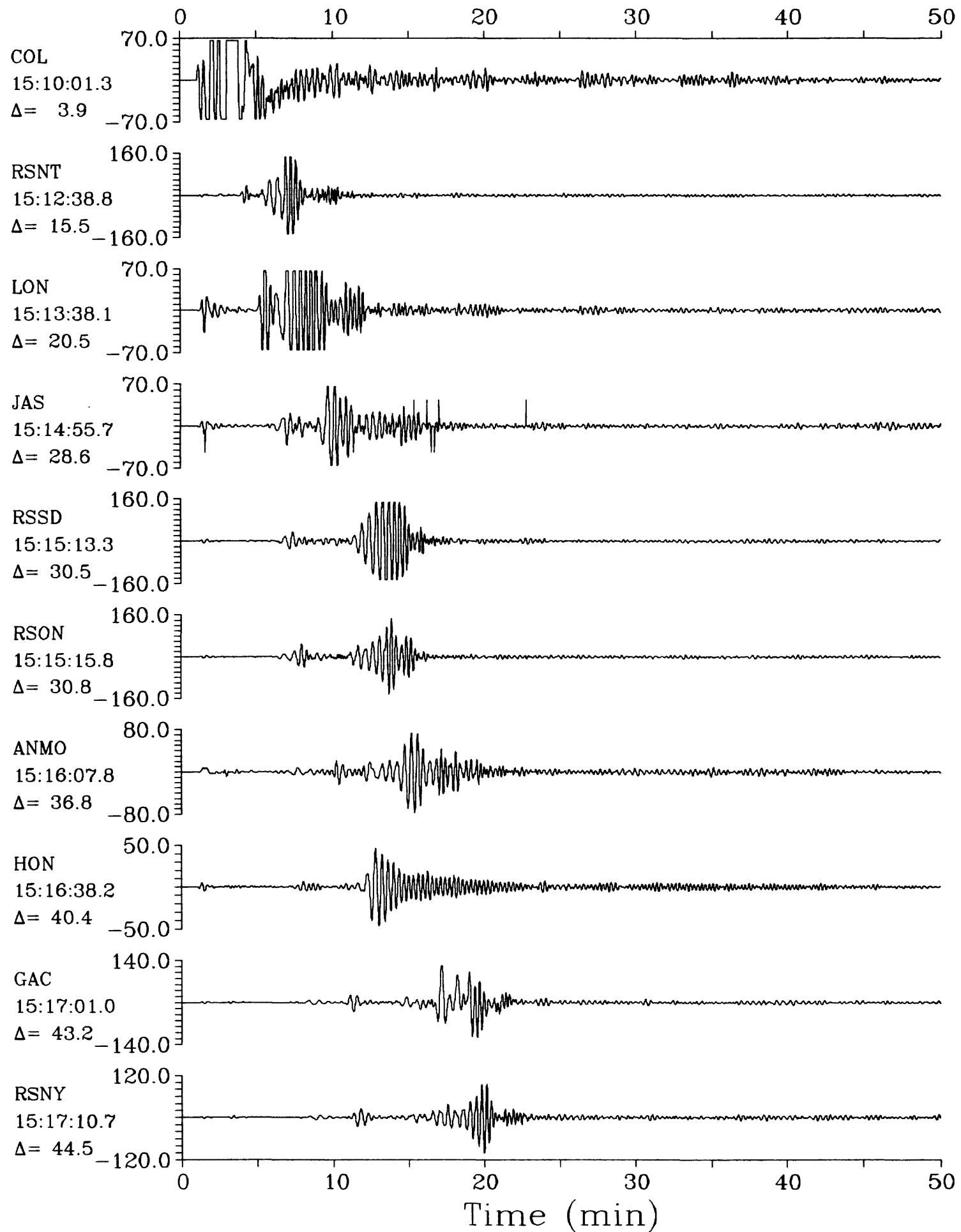


196 LPZ

12 July 1983 15:10:03.40

LPZ

Southern Alaska h=37.0 MB=6.1 ms=6.4

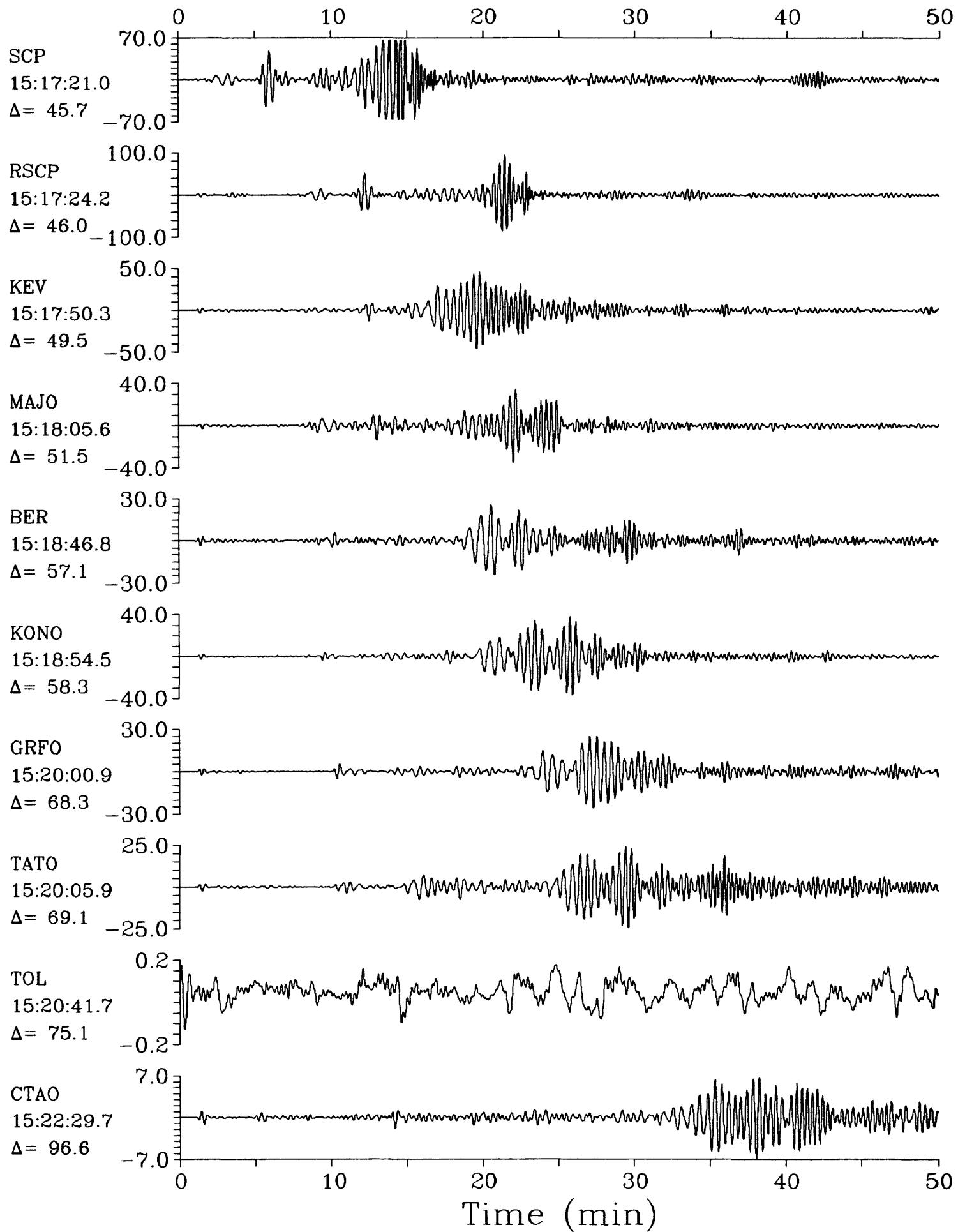


LPZ

12 July 1983 15:10:03.40

LPZ 197

Southern Alaska h=37.0 MB=6.1 ms=6.4

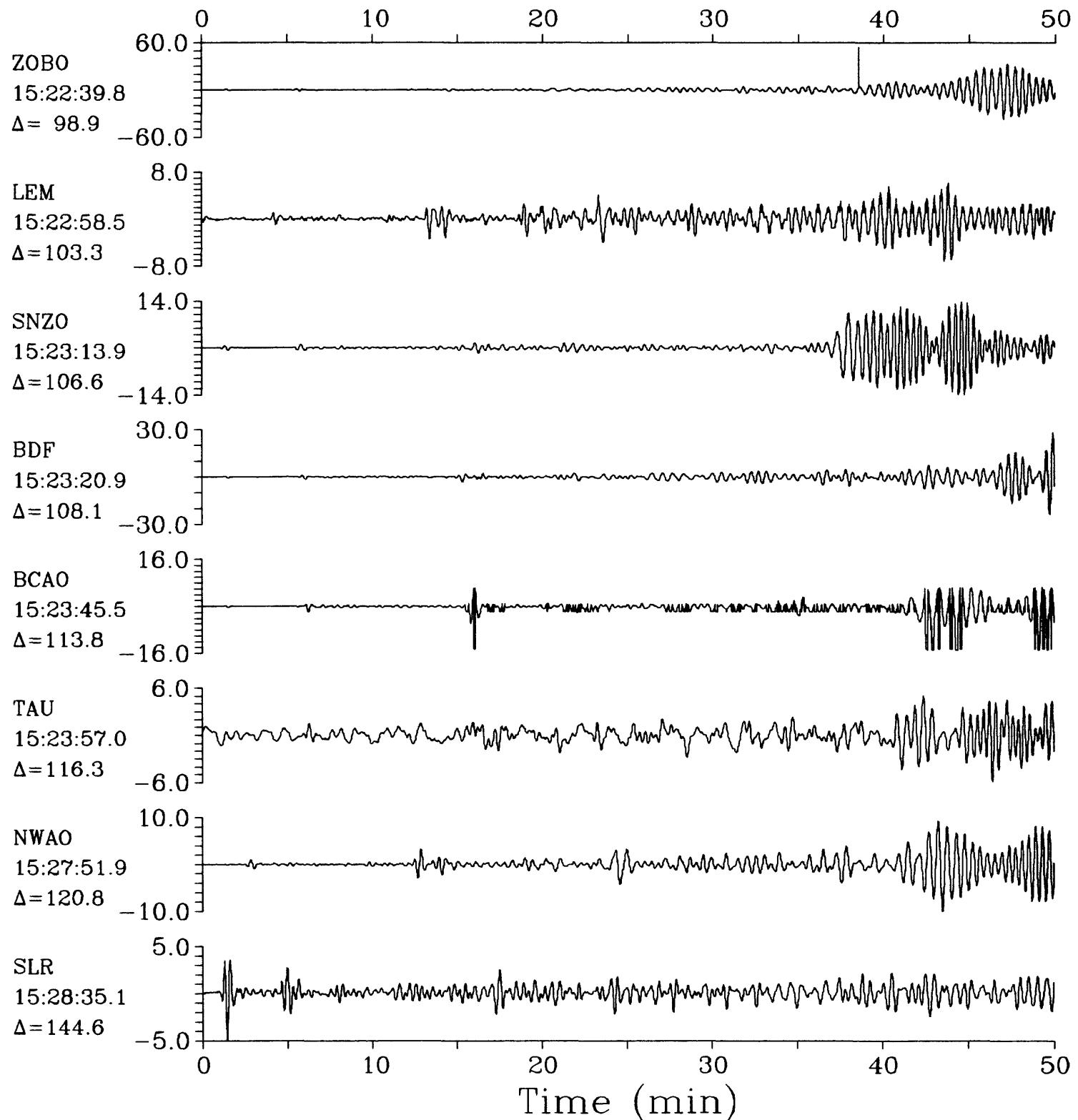


198 LPZ

12 July 1983 15:10:03.40

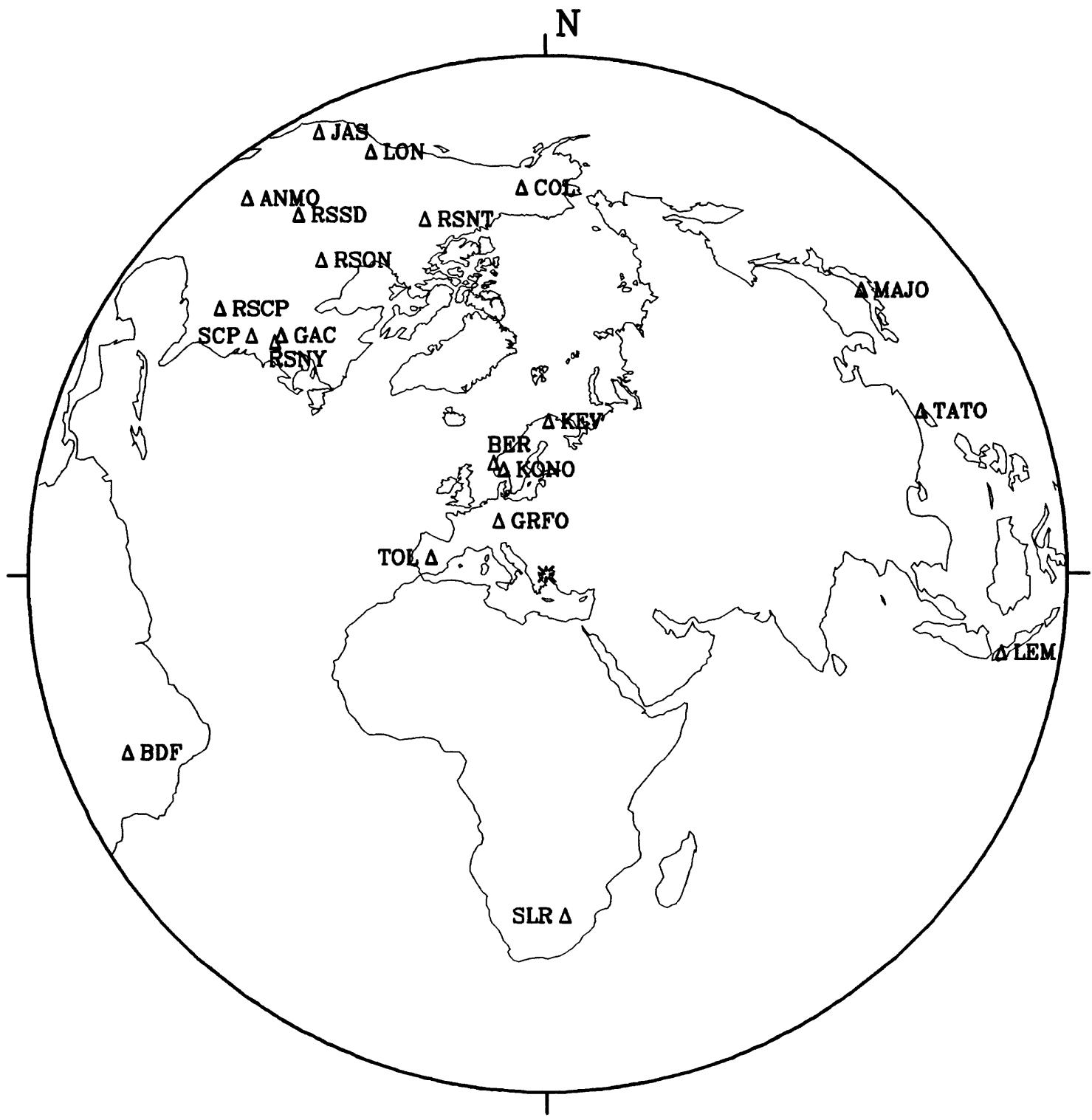
LPZ

Southern Alaska h=37.0 MB=6.1 ms=6.4



06 August 1983 15:43:51.24

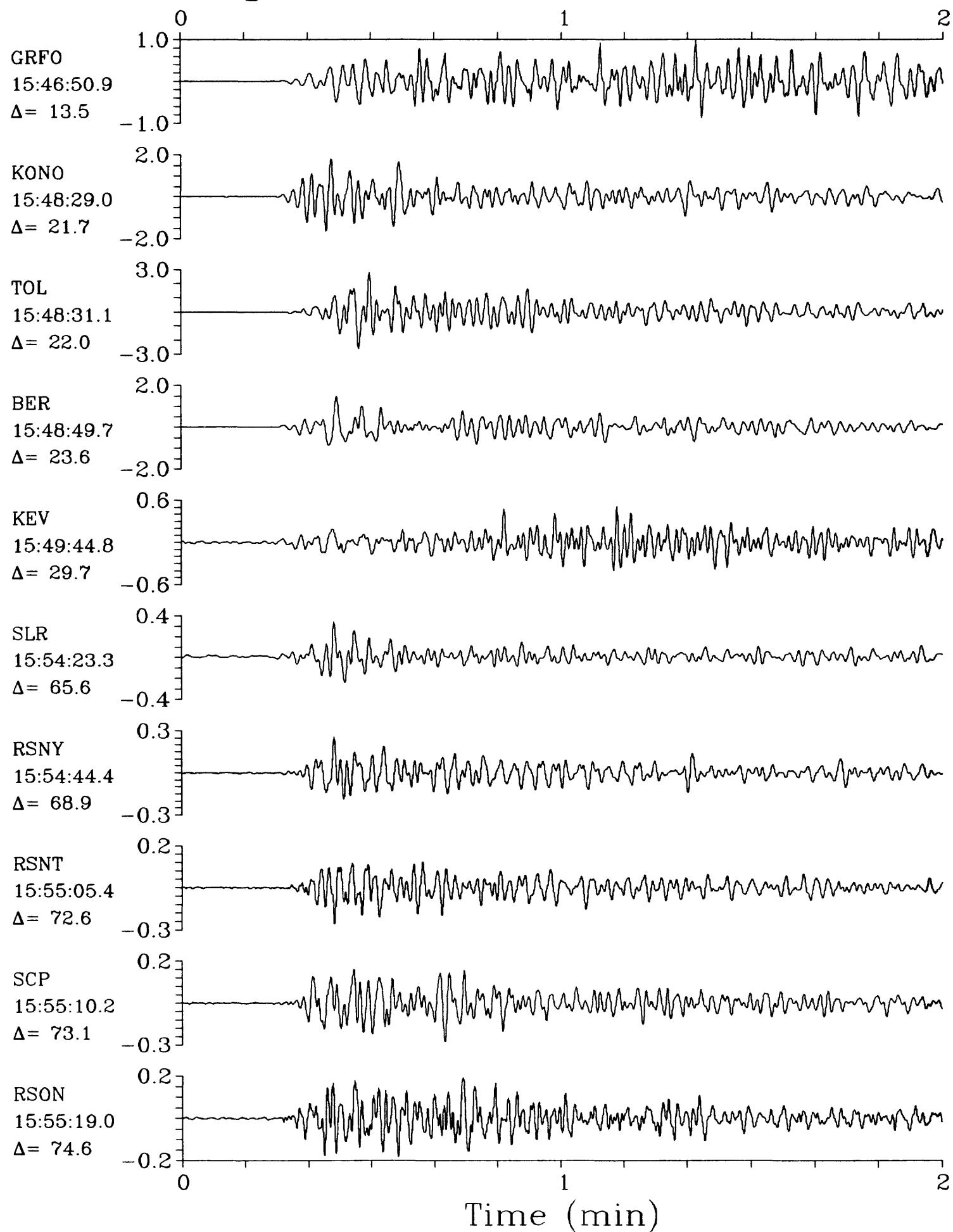
Aegean Sea



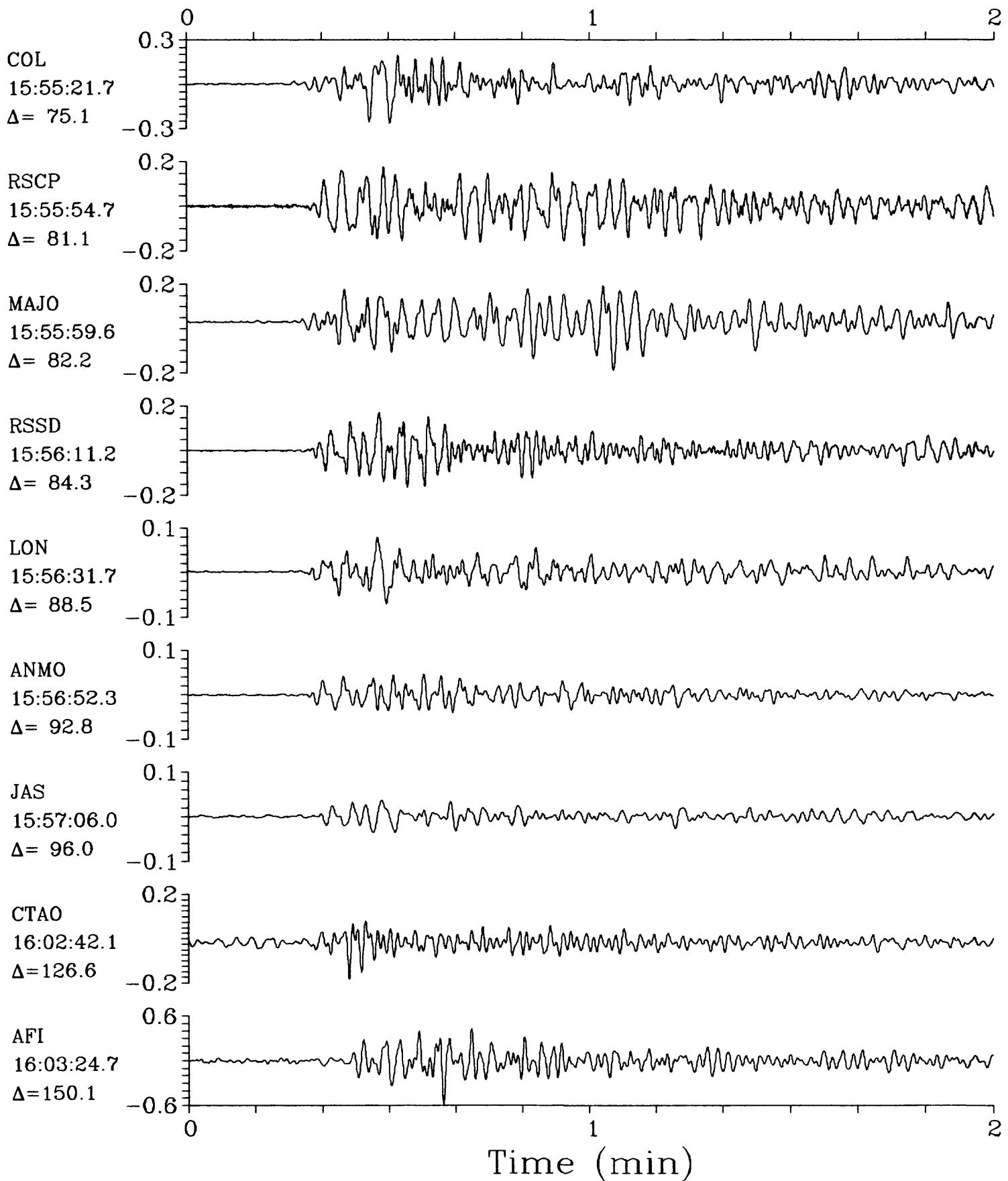
200SPZ

06 August 1983 15:43:51.24
Aegean Sea h=2.4 MB=6.2 ms=7.0

SPZ



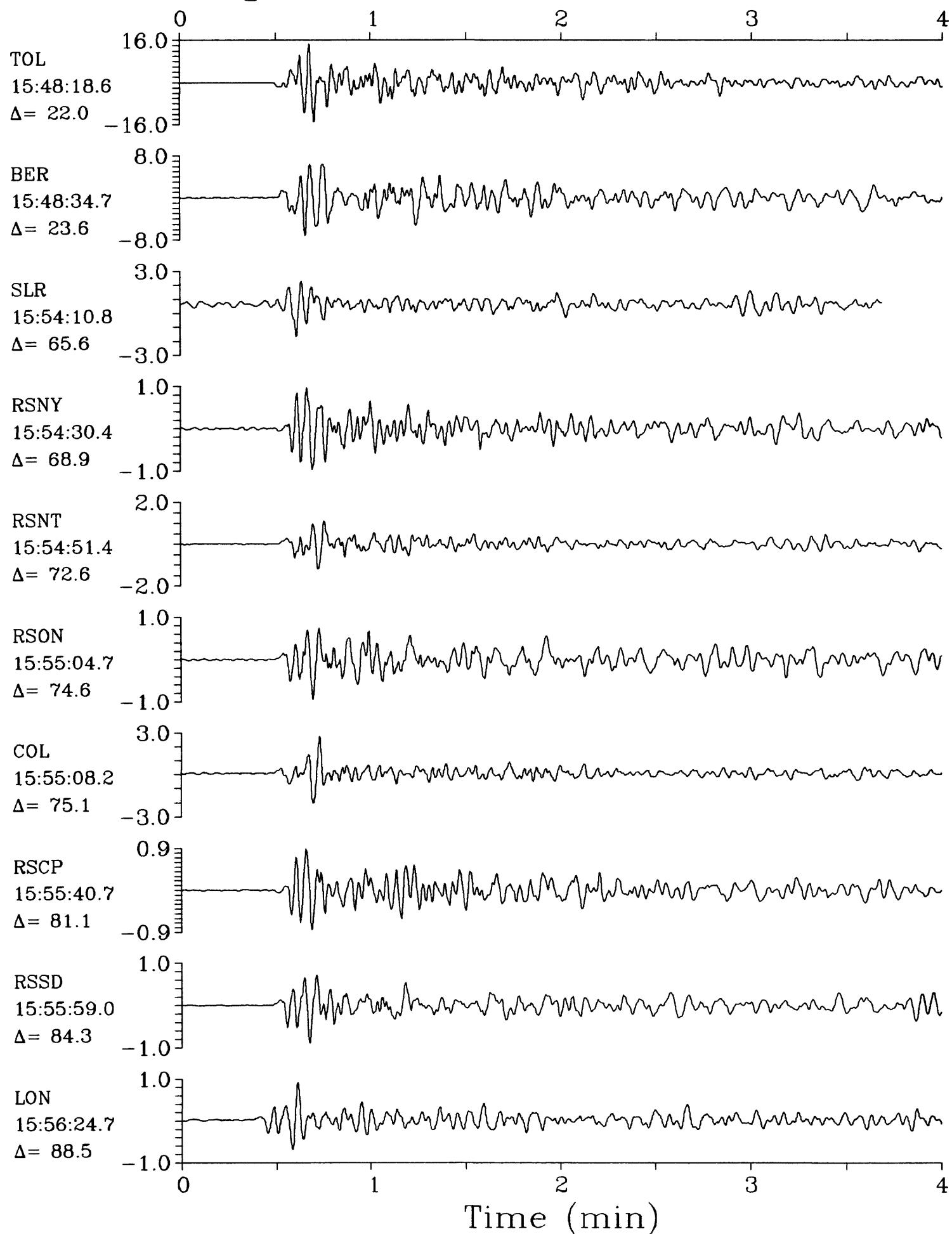
SPZ

06 August 1983 15:43:51.24
Aegean Sea h=2.4 MB=6.2 ms=7.0SPZ²⁰¹

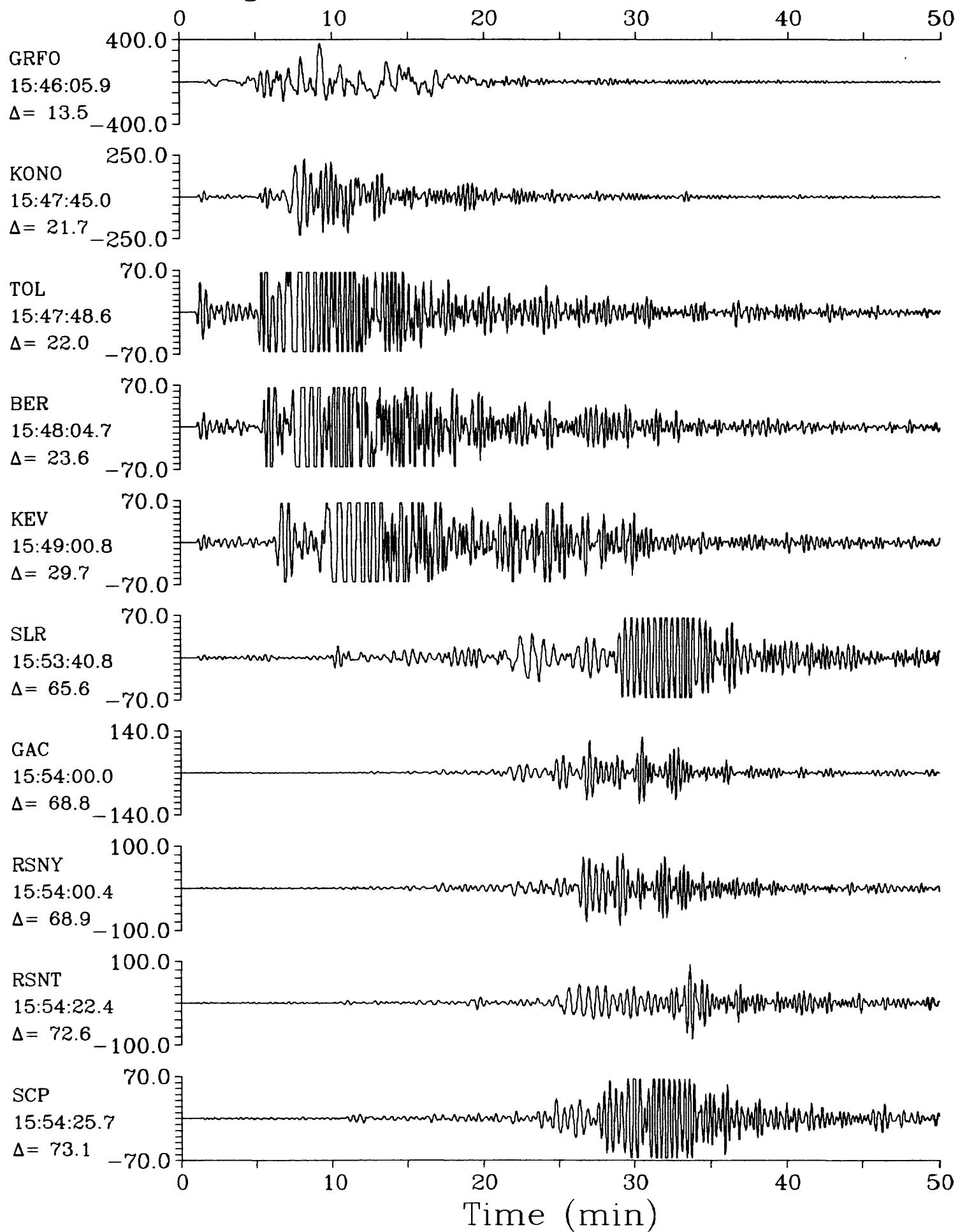
202 IPZ

06 August 1983 15:43:51.24
Aegean Sea h=2.4 MB=6.2 ms=7.0

IPZ



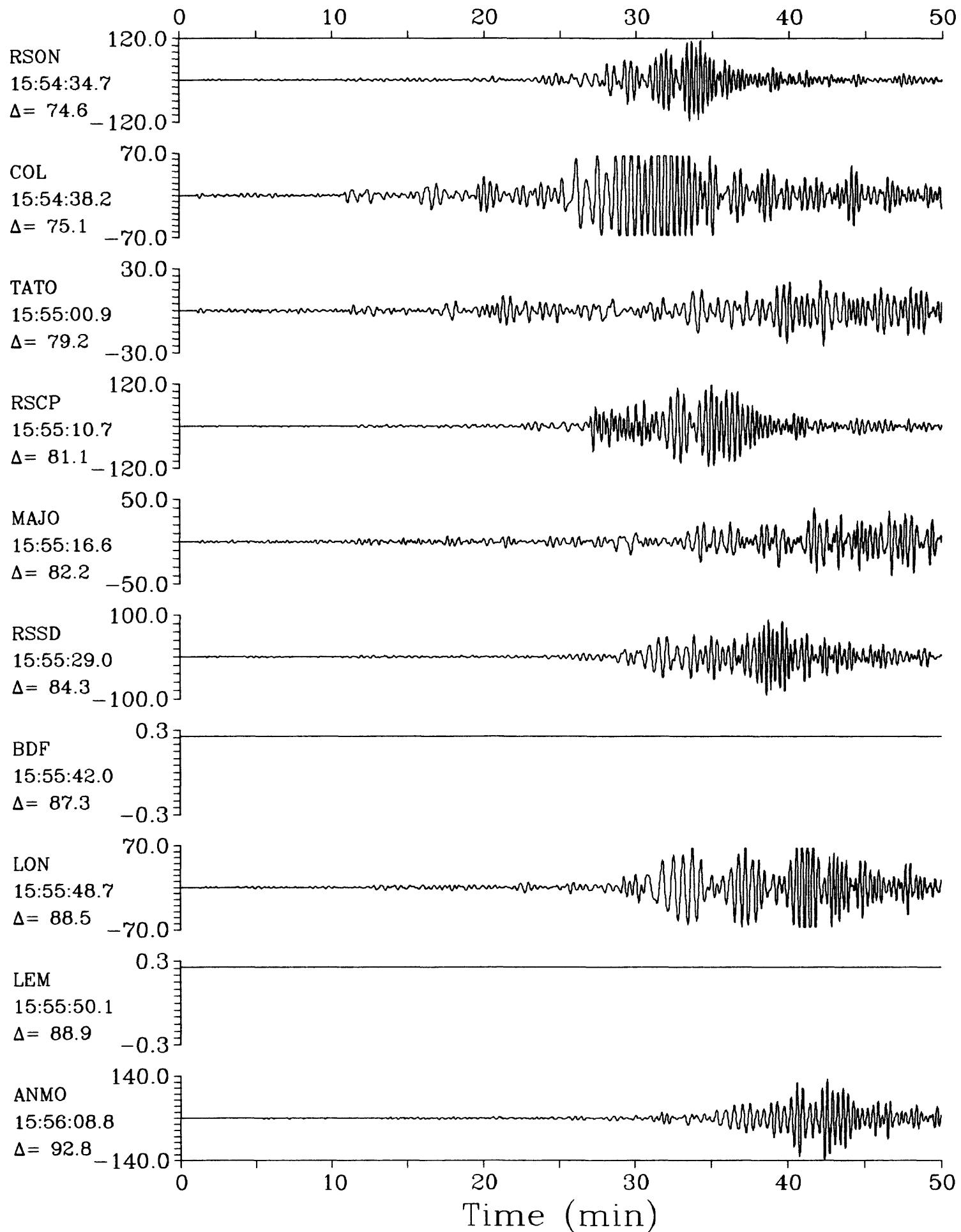
LPZ

06 August 1983 15:43:51.24
Aegean Sea h=2.4 MB=6.2 ms=7.0LPZ²⁰³

²⁰⁴LPZ

06 August 1983 15:43:51.24
Aegean Sea h=2.4 MB=6.2 ms=7.0

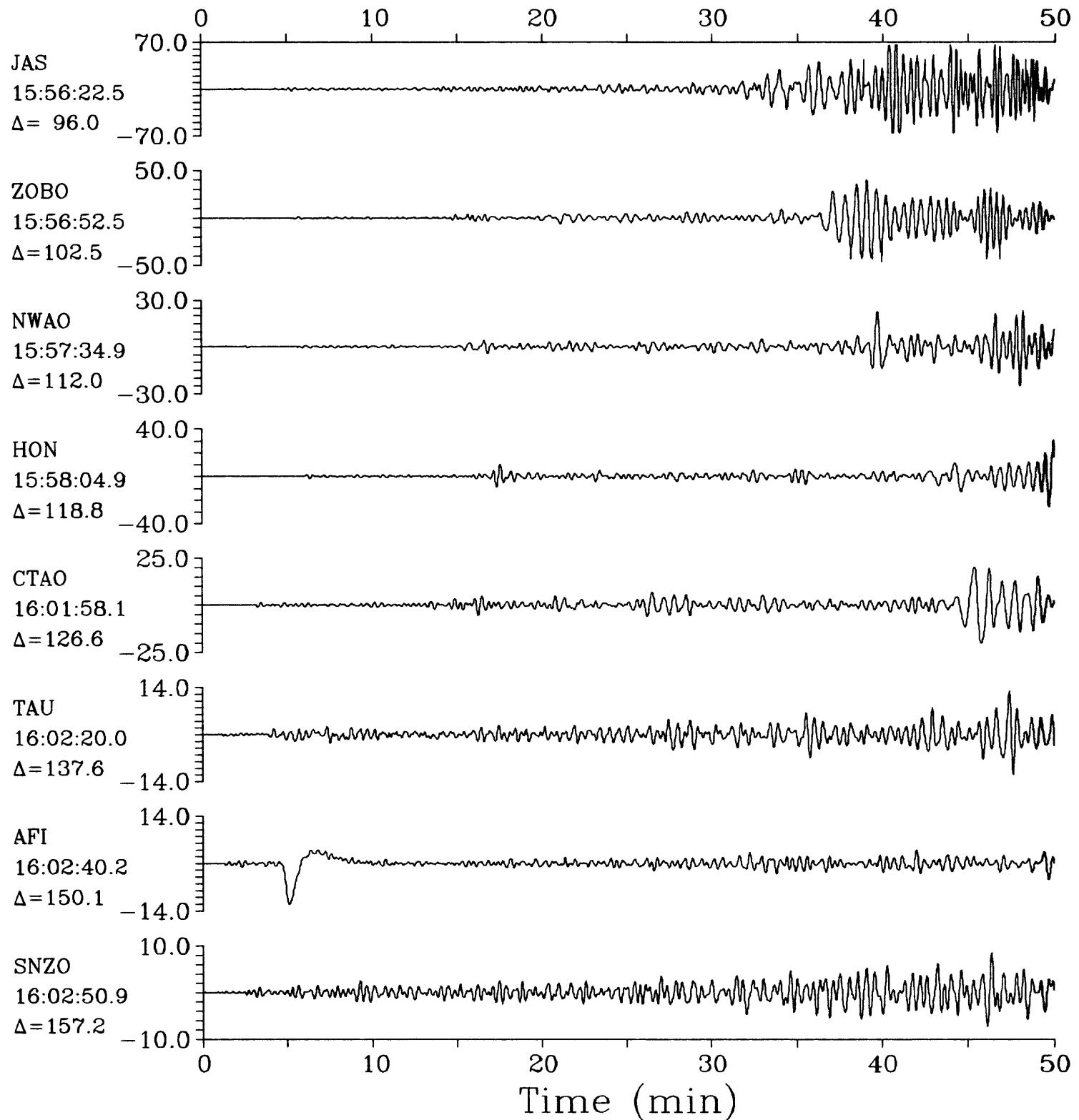
LPZ



LPZ

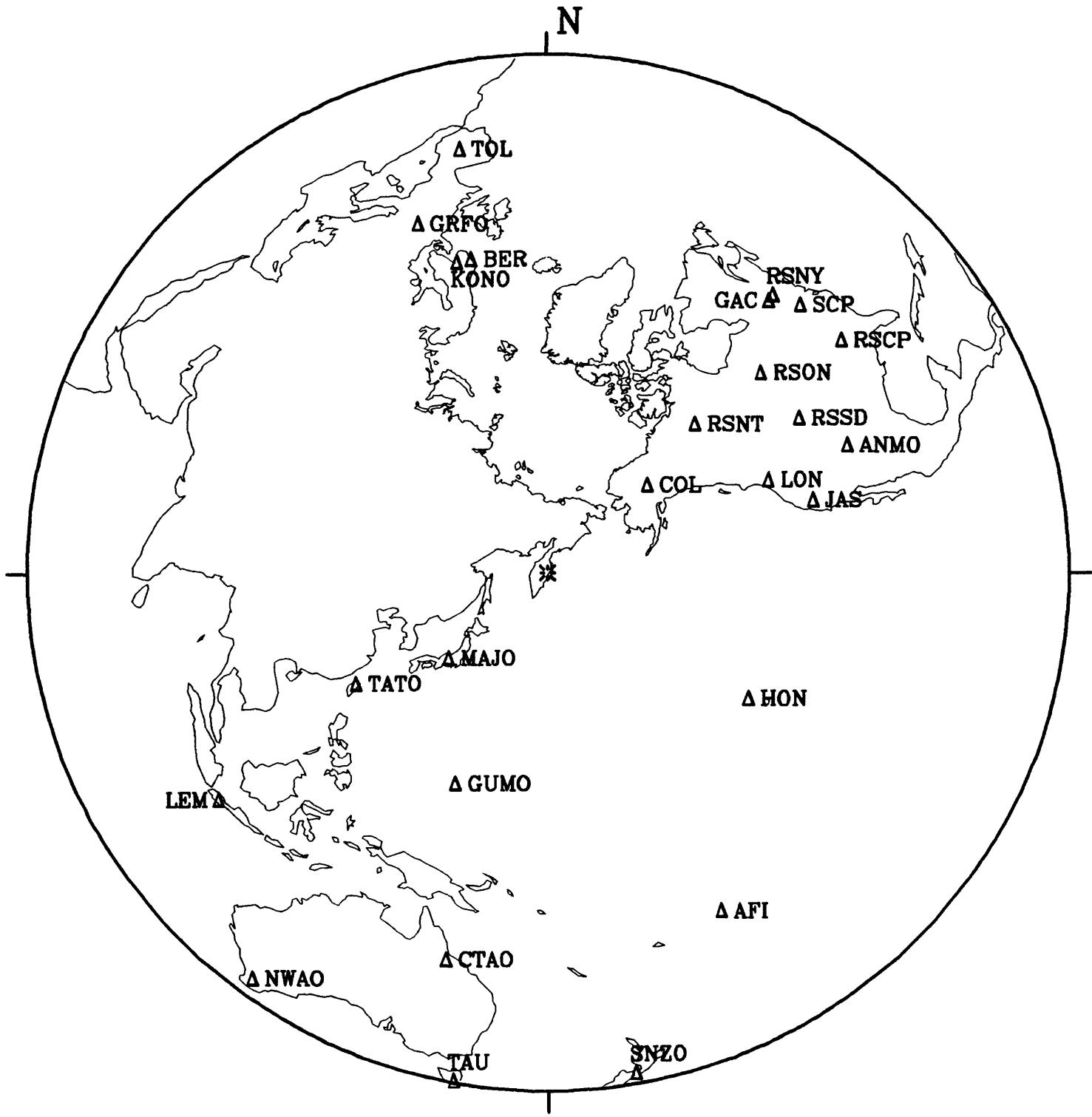
06 August 1983 15:43:51.24
Aegean Sea h=2.4 MB=6.2 ms=7.0

LPZ 205



17 August 1983 10:55:54.13

Near East Coast of Kamchatka

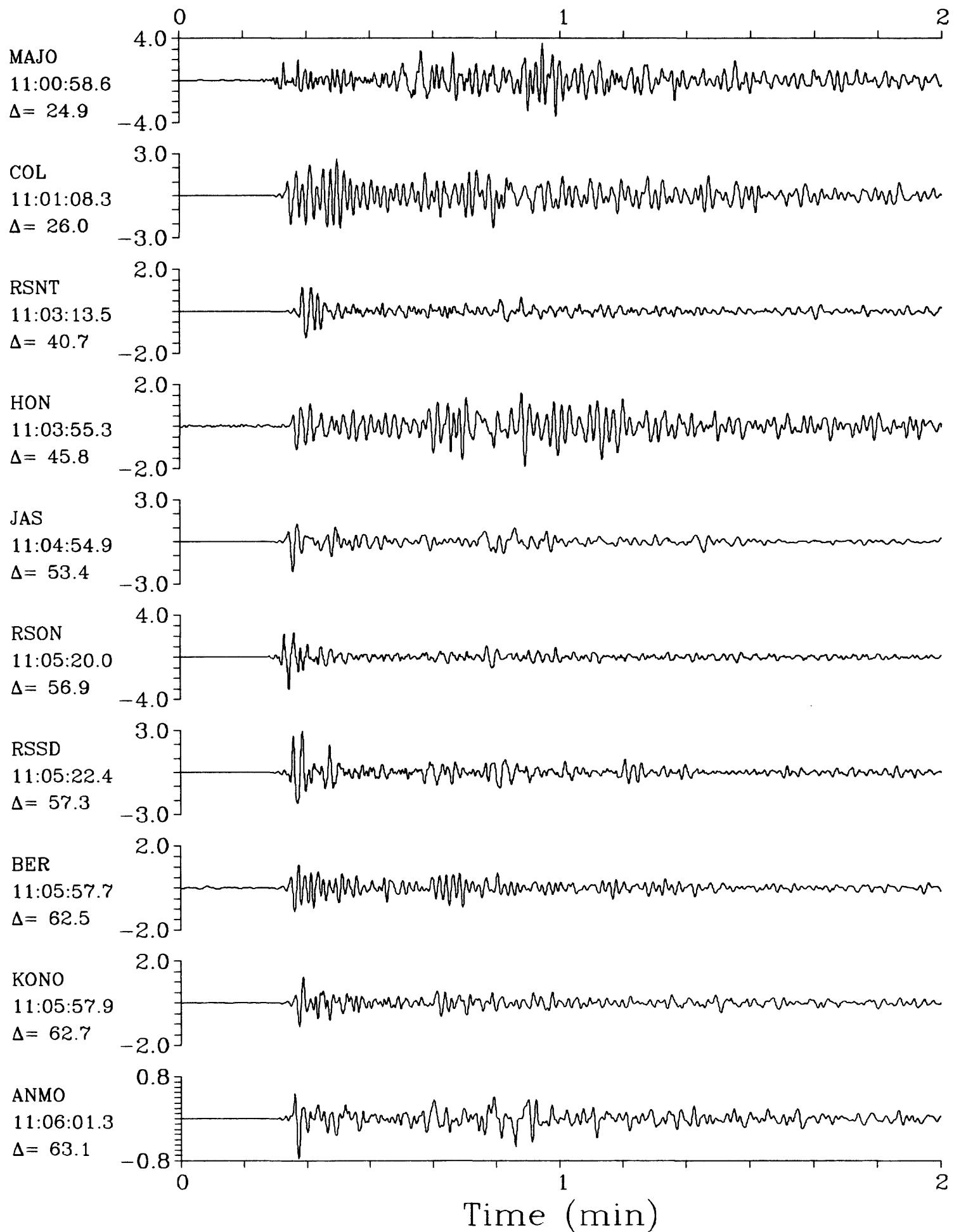


SPZ

17 August 1983 10:55:54.13

SPZ²⁰⁷

Near East Coast of Kamchatka h=62.6 MB=6.6

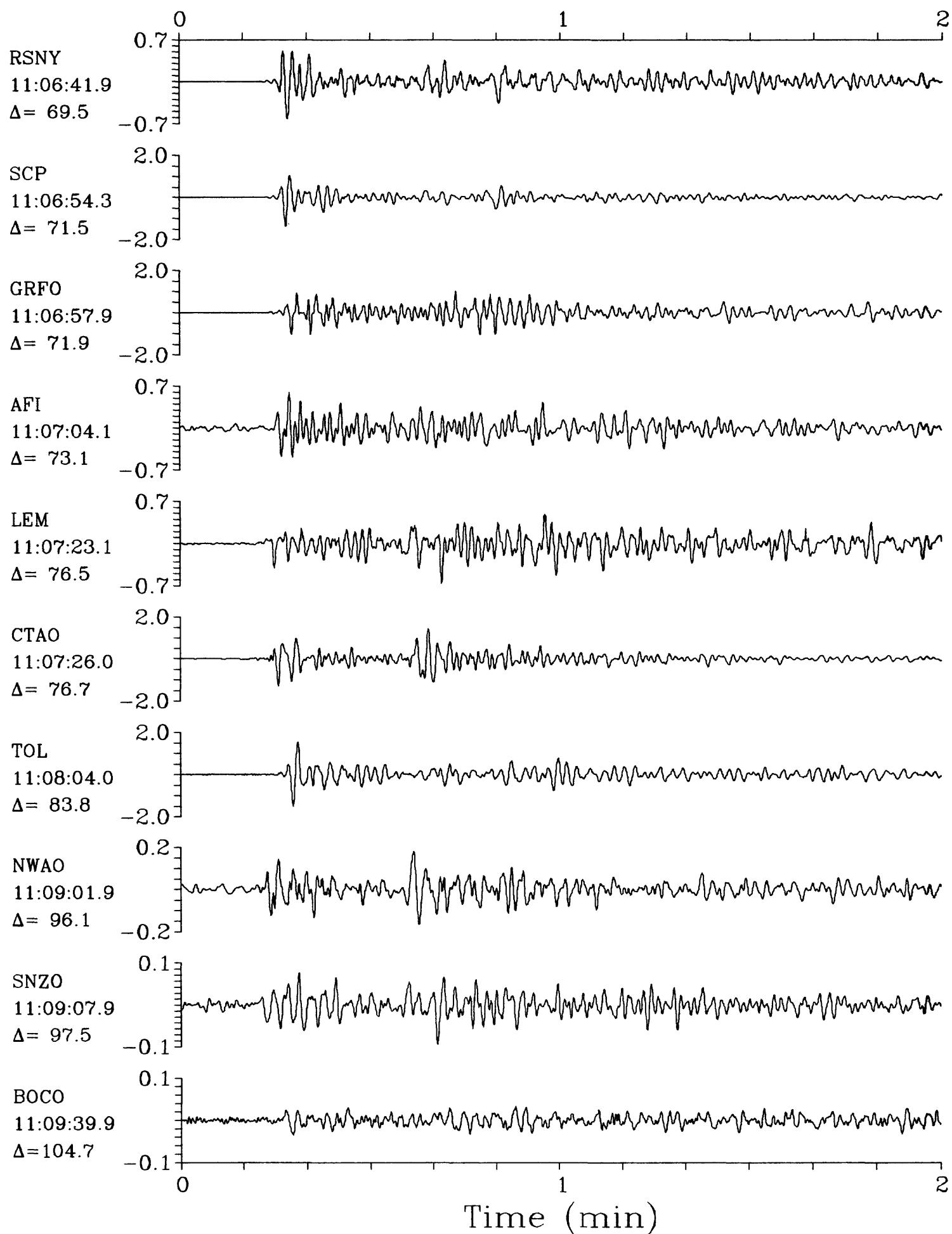


208 SPZ

17 August 1983 10:55:54.13

SPZ

Near East Coast of Kamchatka h=62.6 MB=6.6

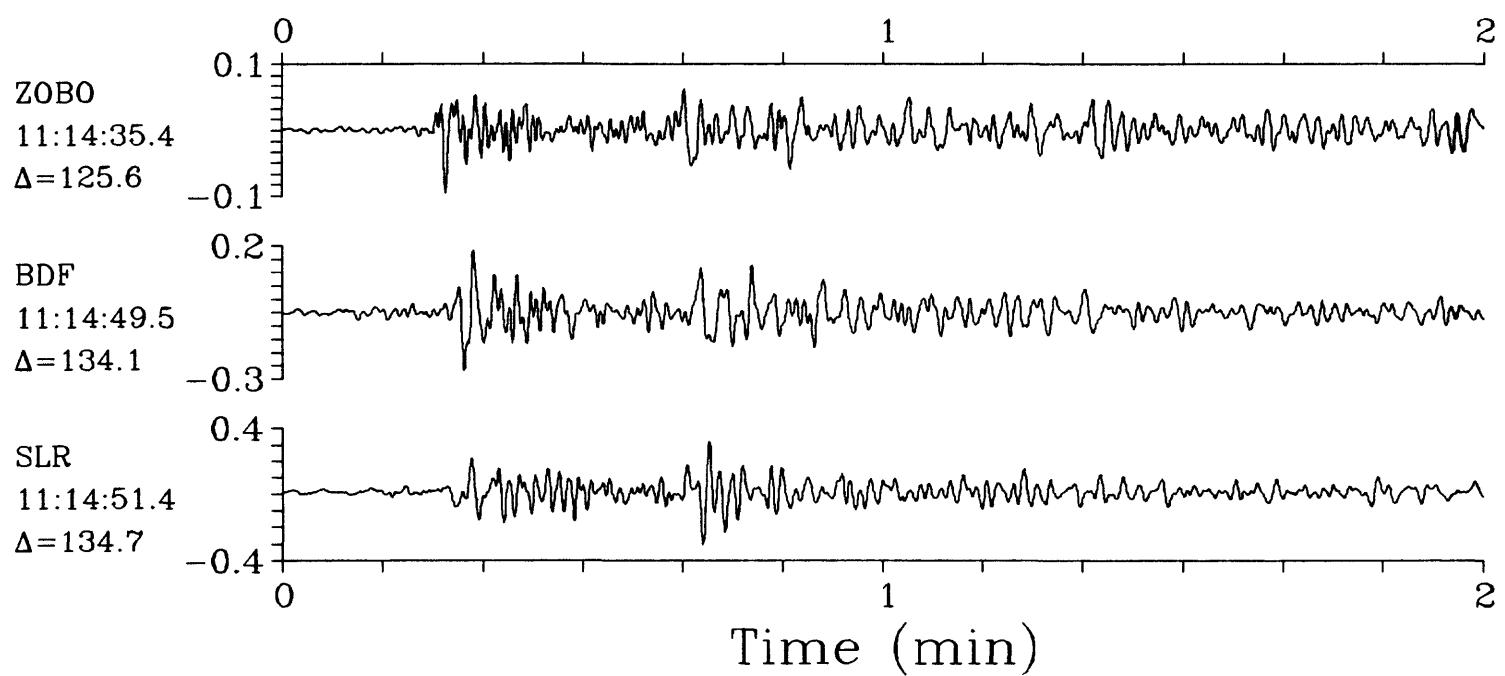


SPZ

17 August 1983 10:55:54.13

SPZ²⁰⁹

Near East Coast of Kamchatka h=62.6 MB=6.6

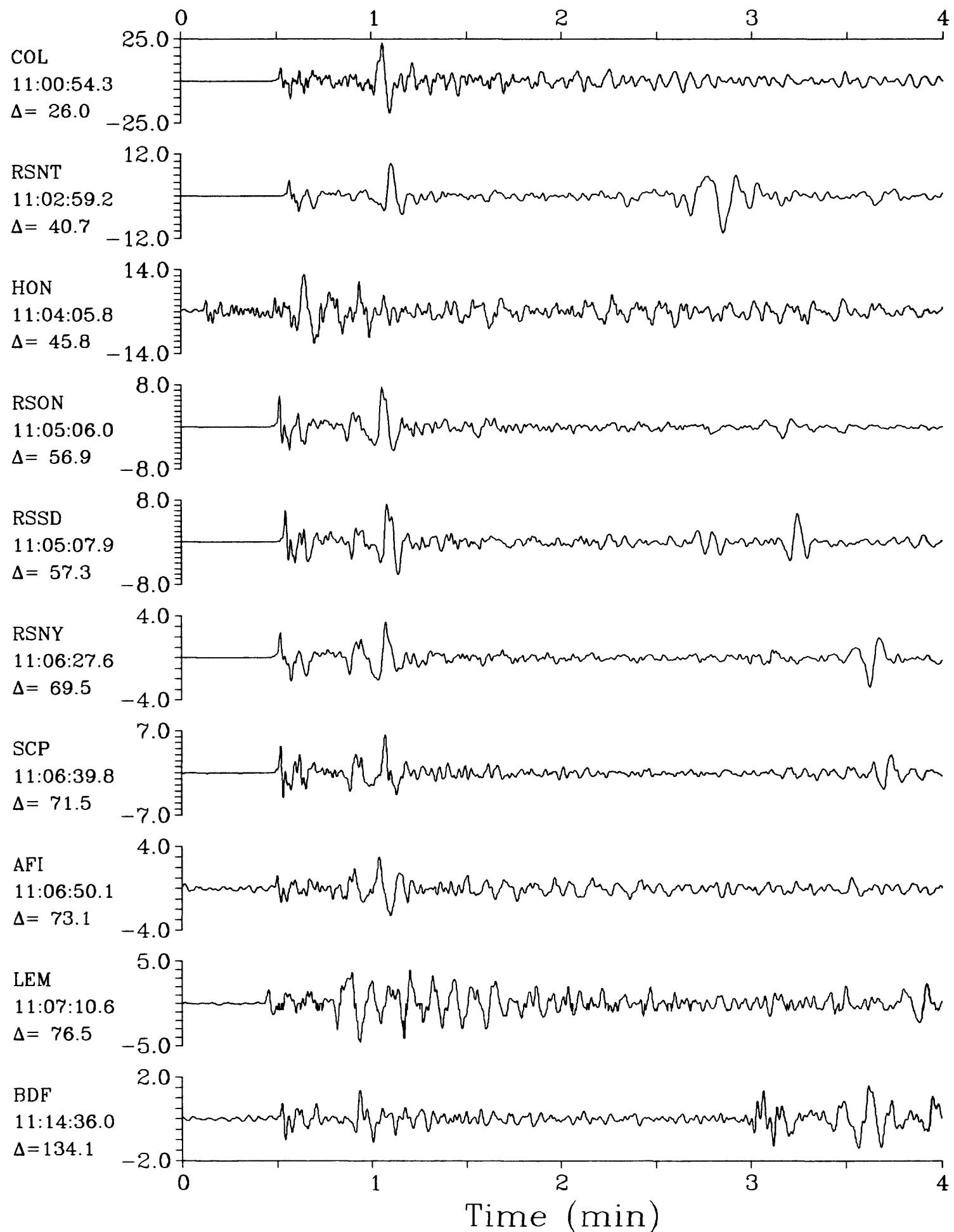


²¹⁰IPZ

17 August 1983 10:55:54.13

IPZ

Near East Coast of Kamchatka h=62.6 MB=6.6

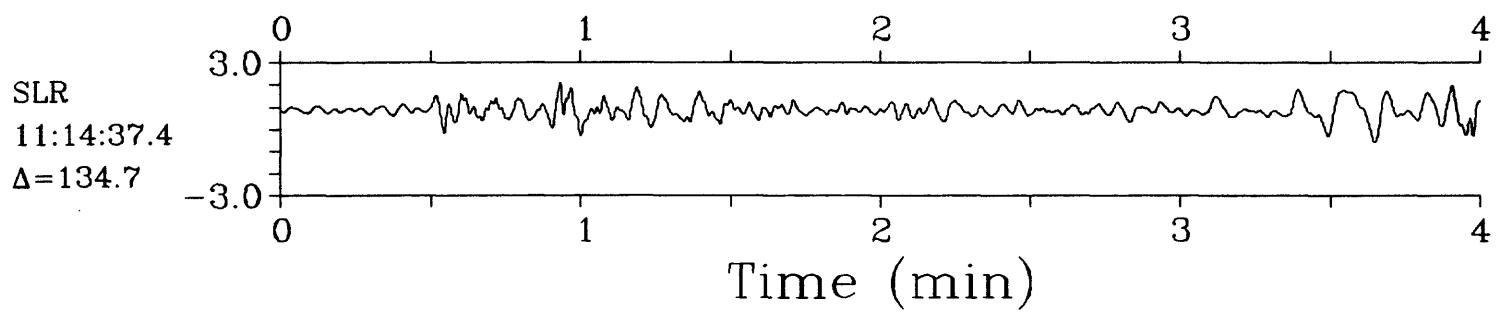


IPZ

17 August 1983 10:55:54.13

IPZ²¹¹

Near East Coast of Kamchatka h=62.6 MB=6.6

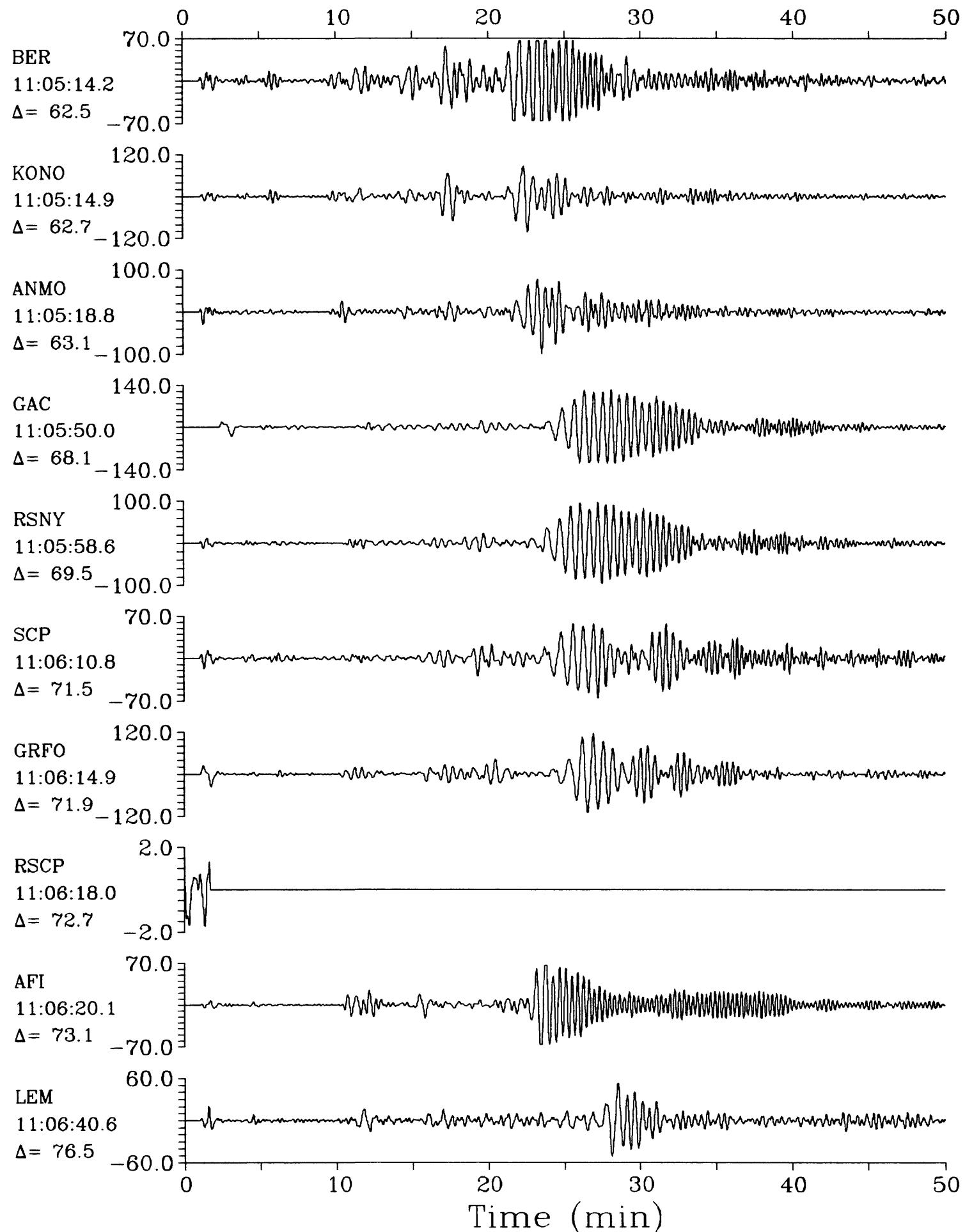


²¹²LPZ

17 August 1983 10:55:54.13

LPZ

Near East Coast of Kamchatka h=62.6 MB=6.6

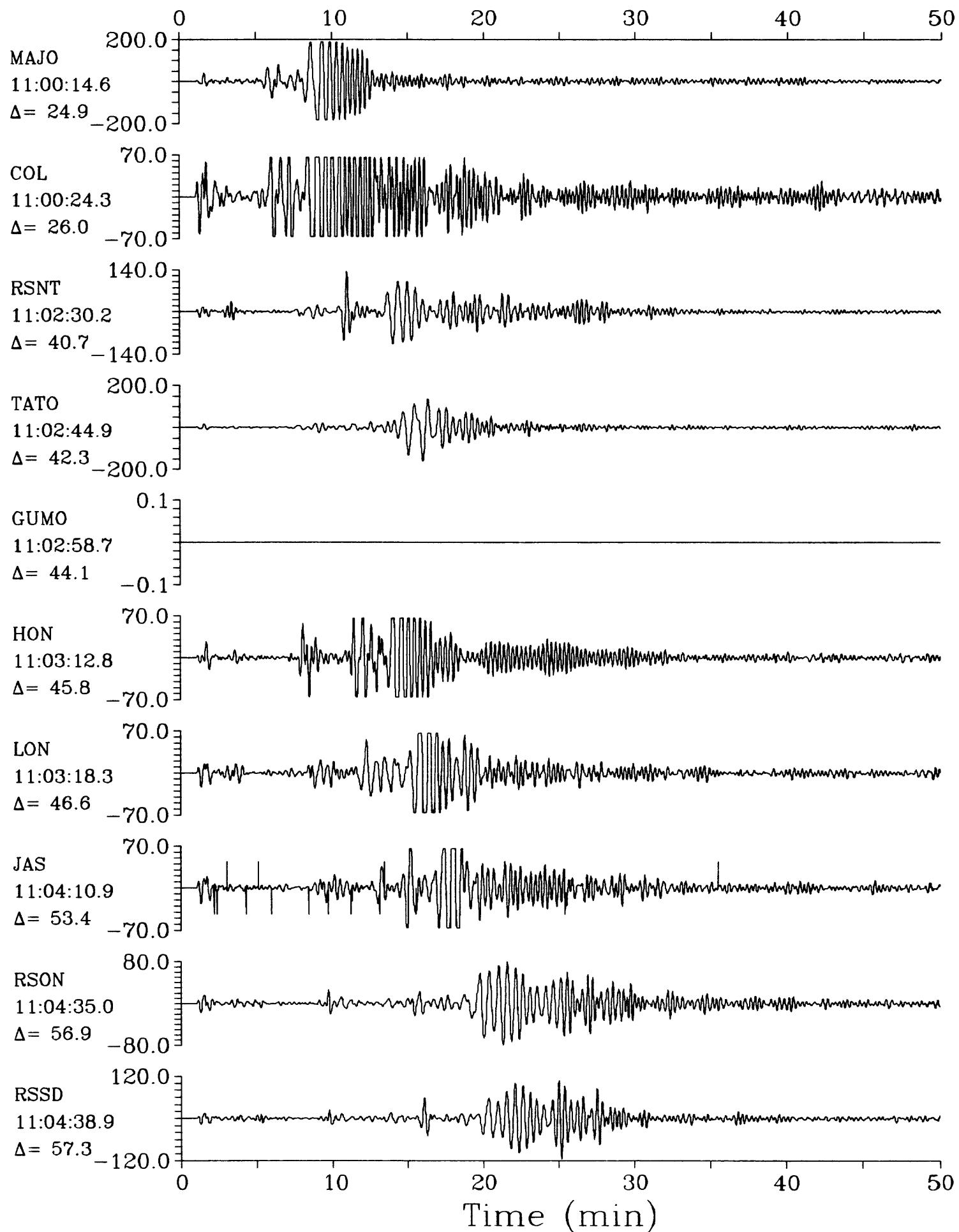


LPZ

17 August 1983 10:55:54.13

LPZ 213

Near East Coast of Kamchatka h=62.6 MB=6.6

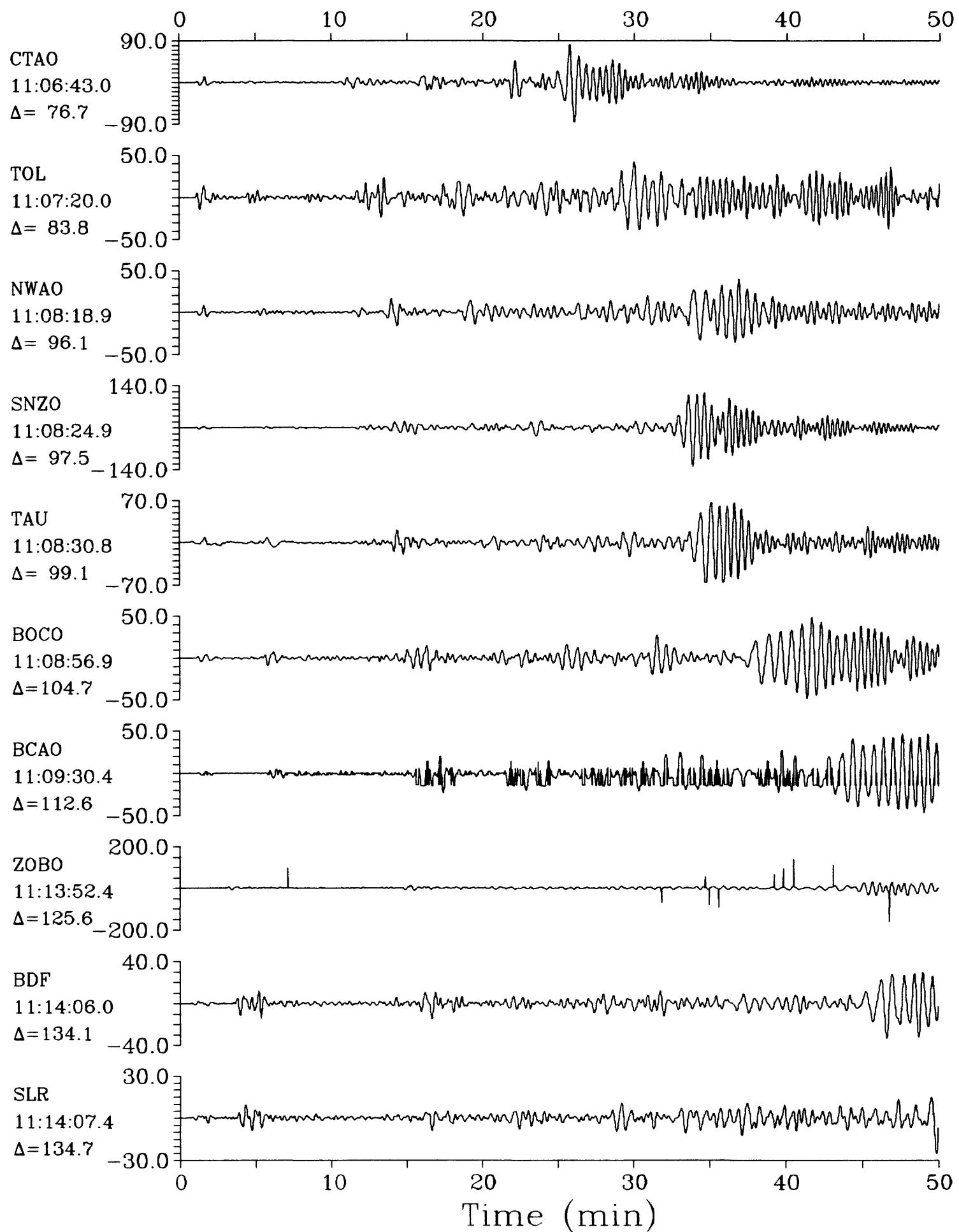


²¹⁴LPZ

17 August 1983 10:55:54.13

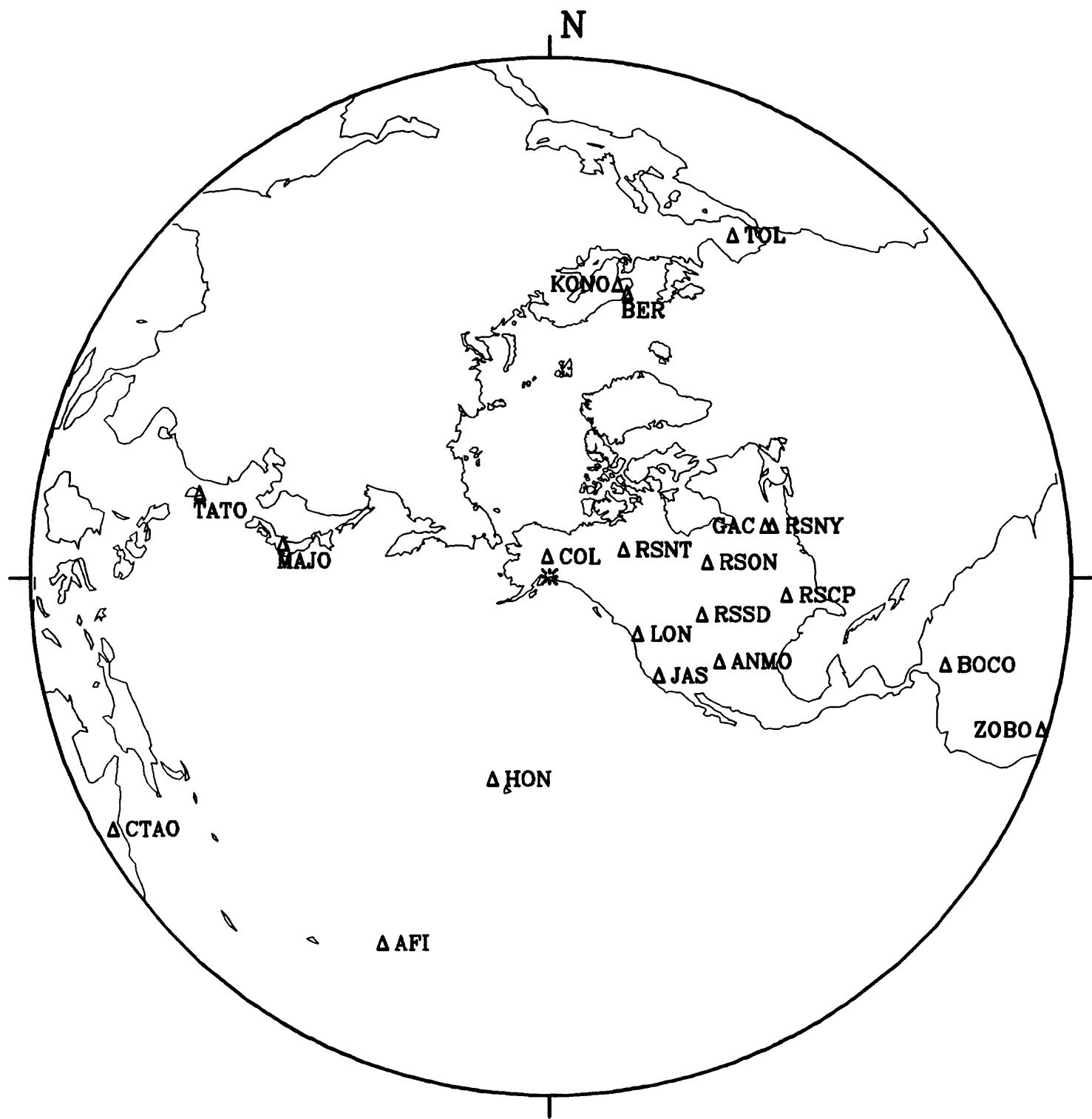
LPZ

Near East Coast of Kamchatka h=62.6 MB=6.6



07 September 1983 19:22:05.15

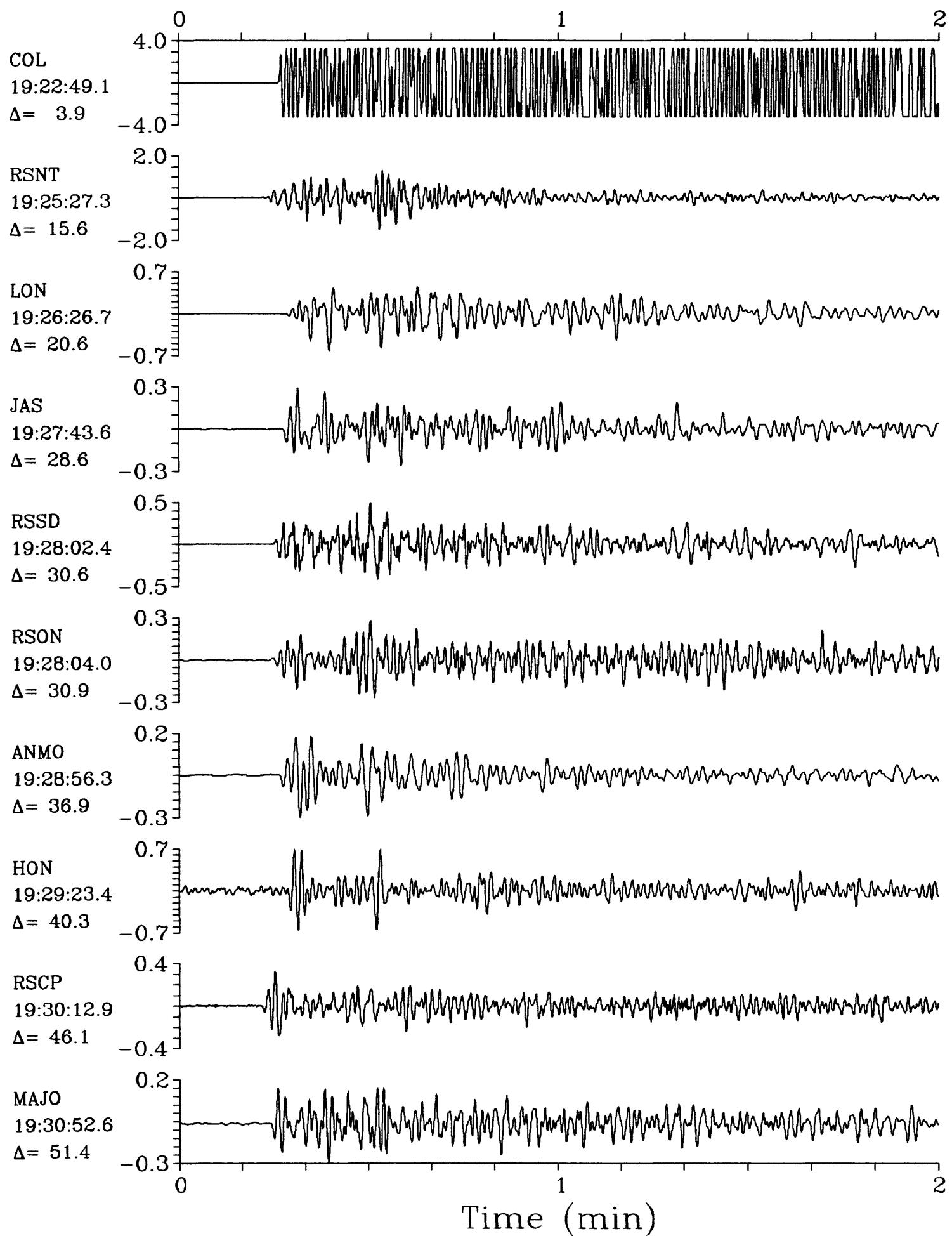
Southern Alaska



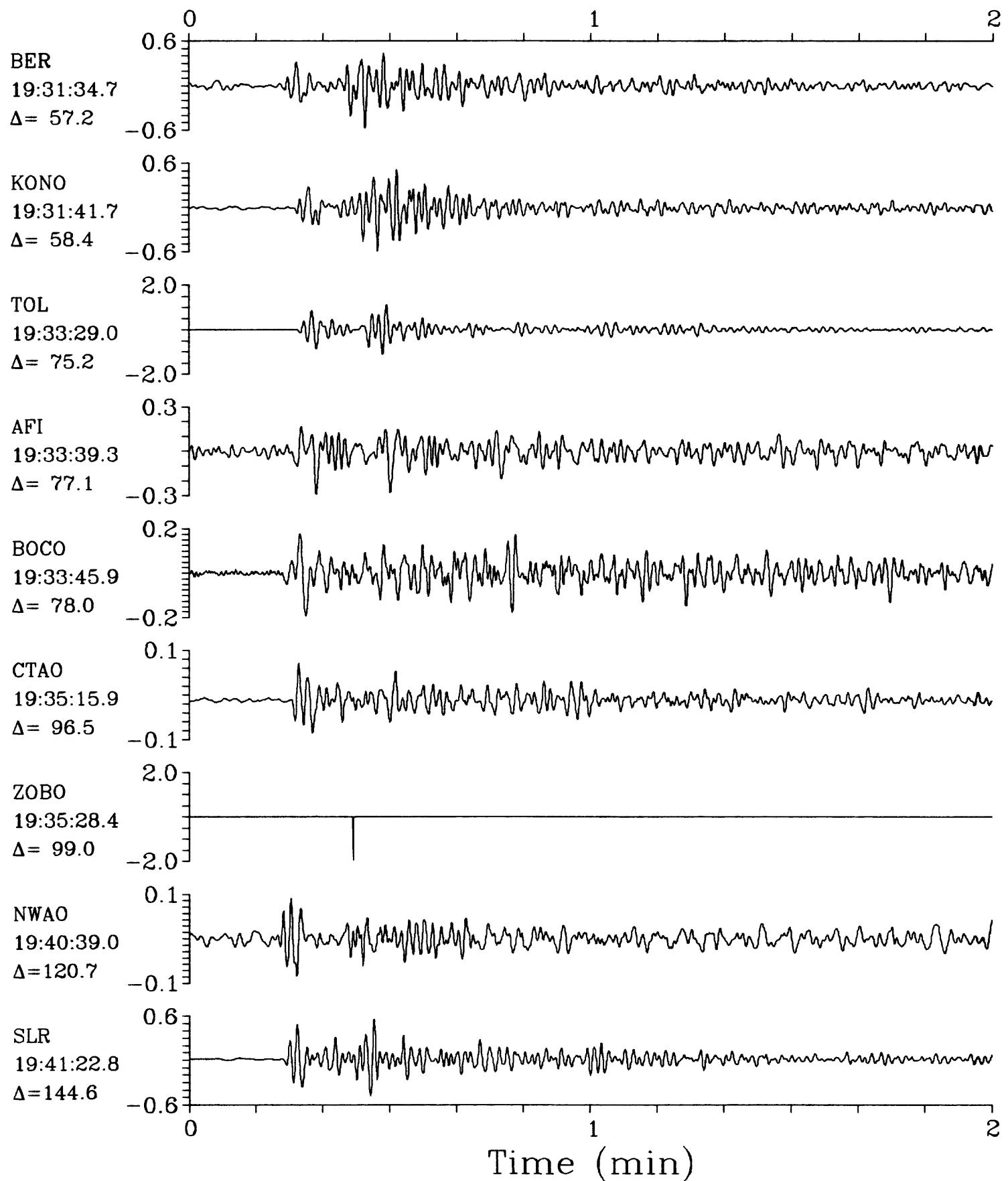
216 SPZ

07 September 1983 19:22:05.15
Southern Alaska h=45.0 MB=6.2 ms=6.2

SPZ



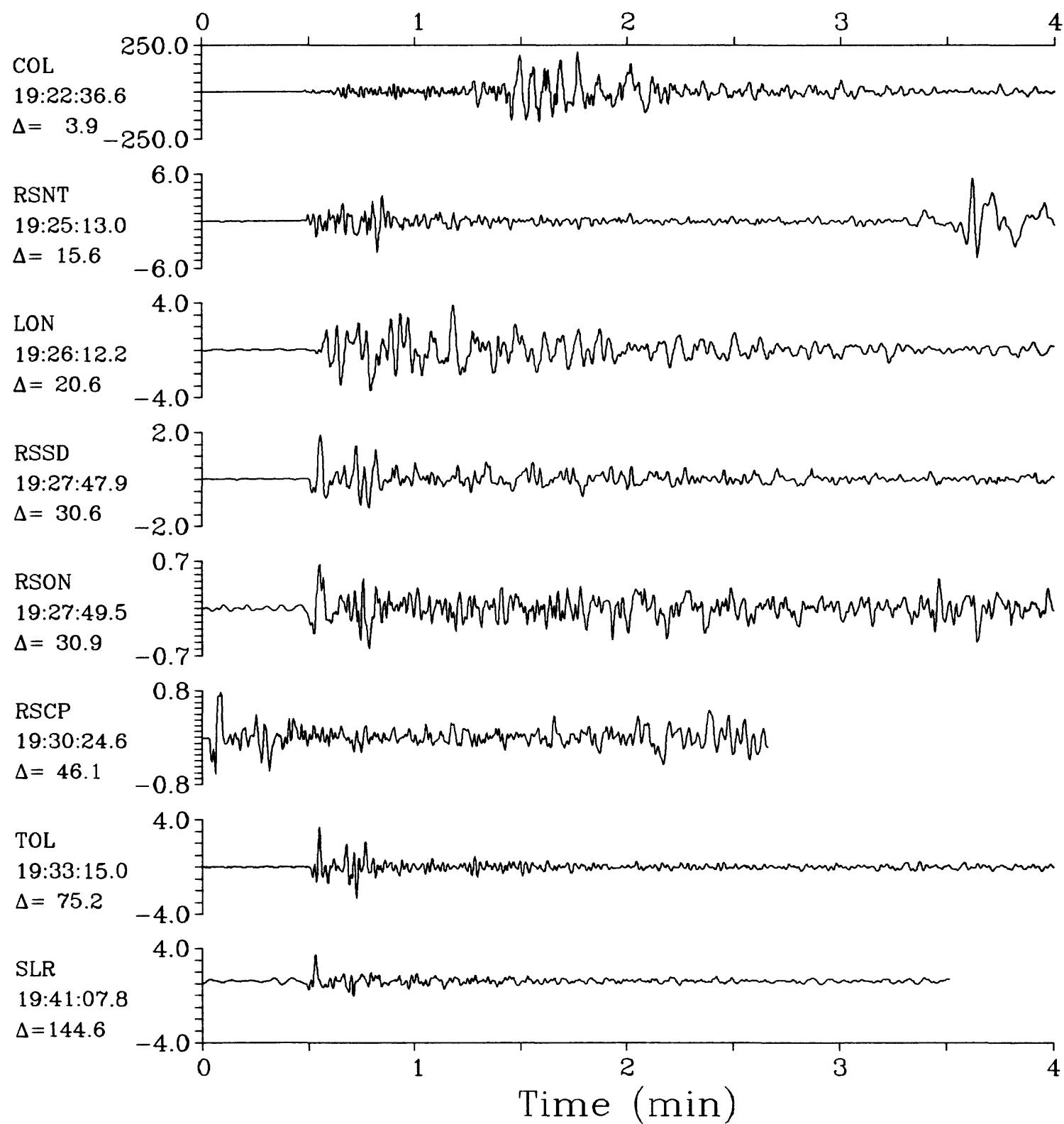
SPZ

07 September 1983 19:22:05.15
Southern Alaska h=45.0 MB=6.2 ms=6.2SPZ²¹⁷

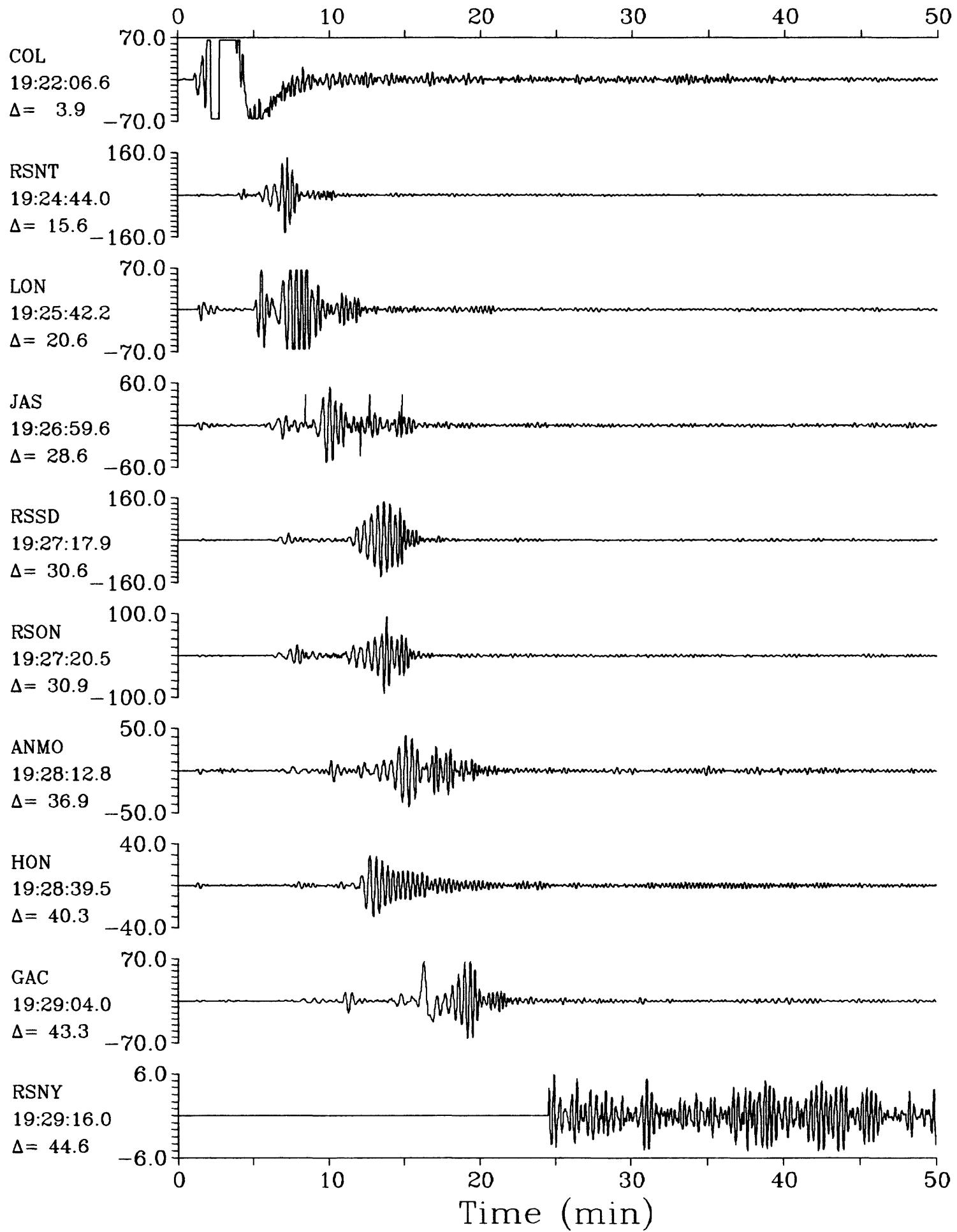
218 IPZ

07 September 1983 19:22:05.15
Southern Alaska h=45.0 MB=6.2 ms=6.2

IPZ



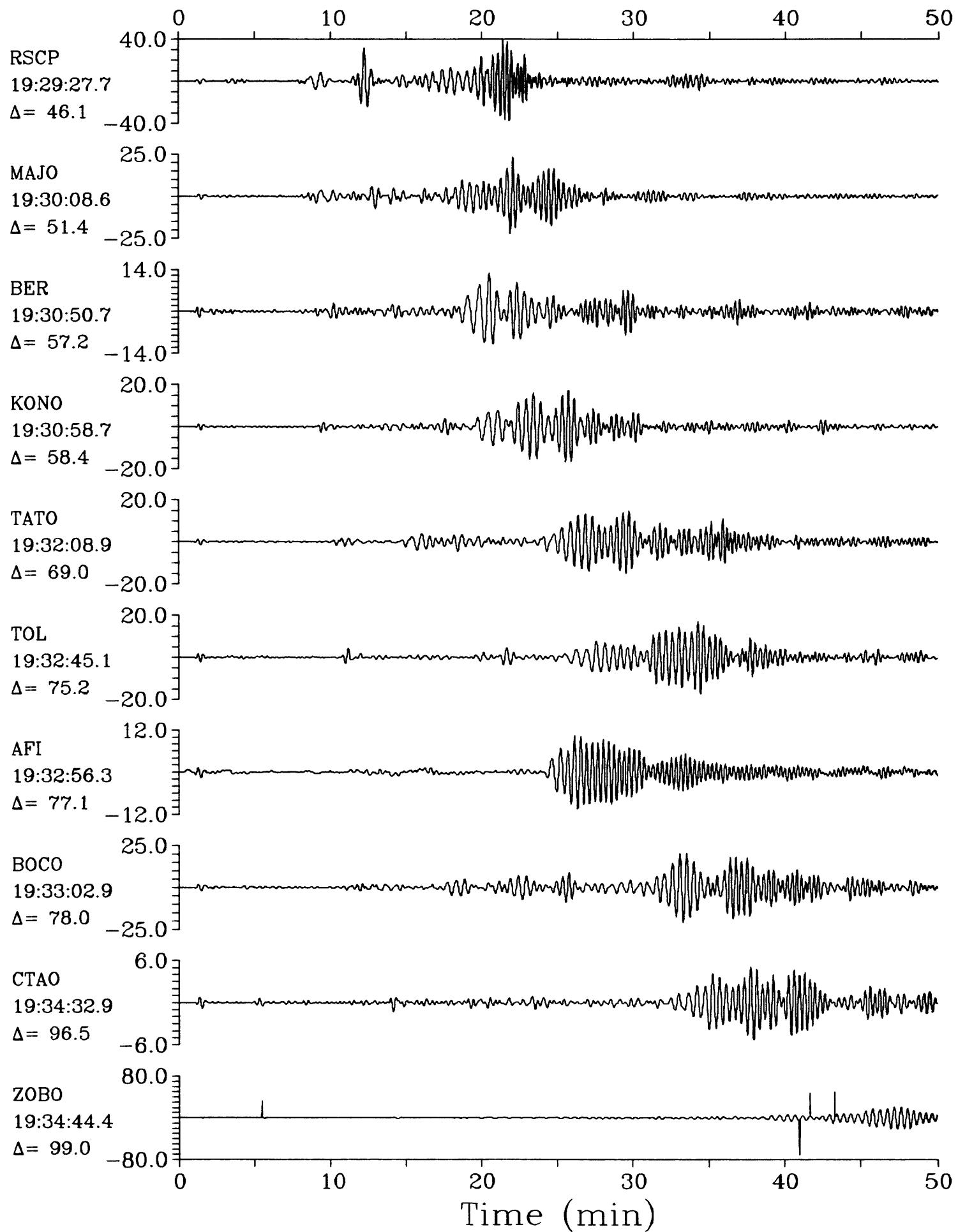
LPZ

07 September 1983 19:22:05.15
Southern Alaska h=45.0 MB=6.2 ms=6.2LPZ²¹⁹

220 LPZ

07 September 1983 19:22:05.15
Southern Alaska h=45.0 MB=6.2 ms=6.2

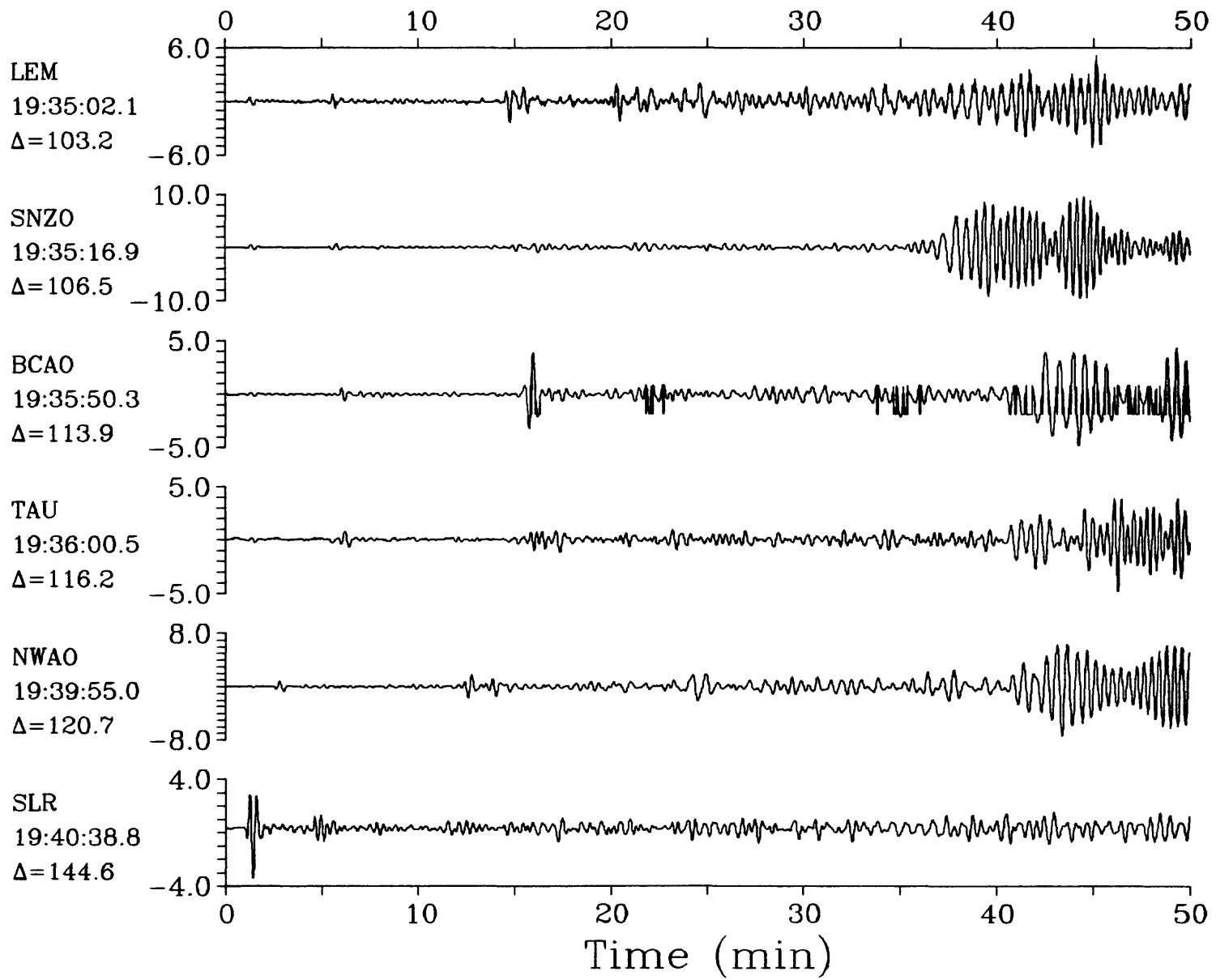
LPZ



LPZ

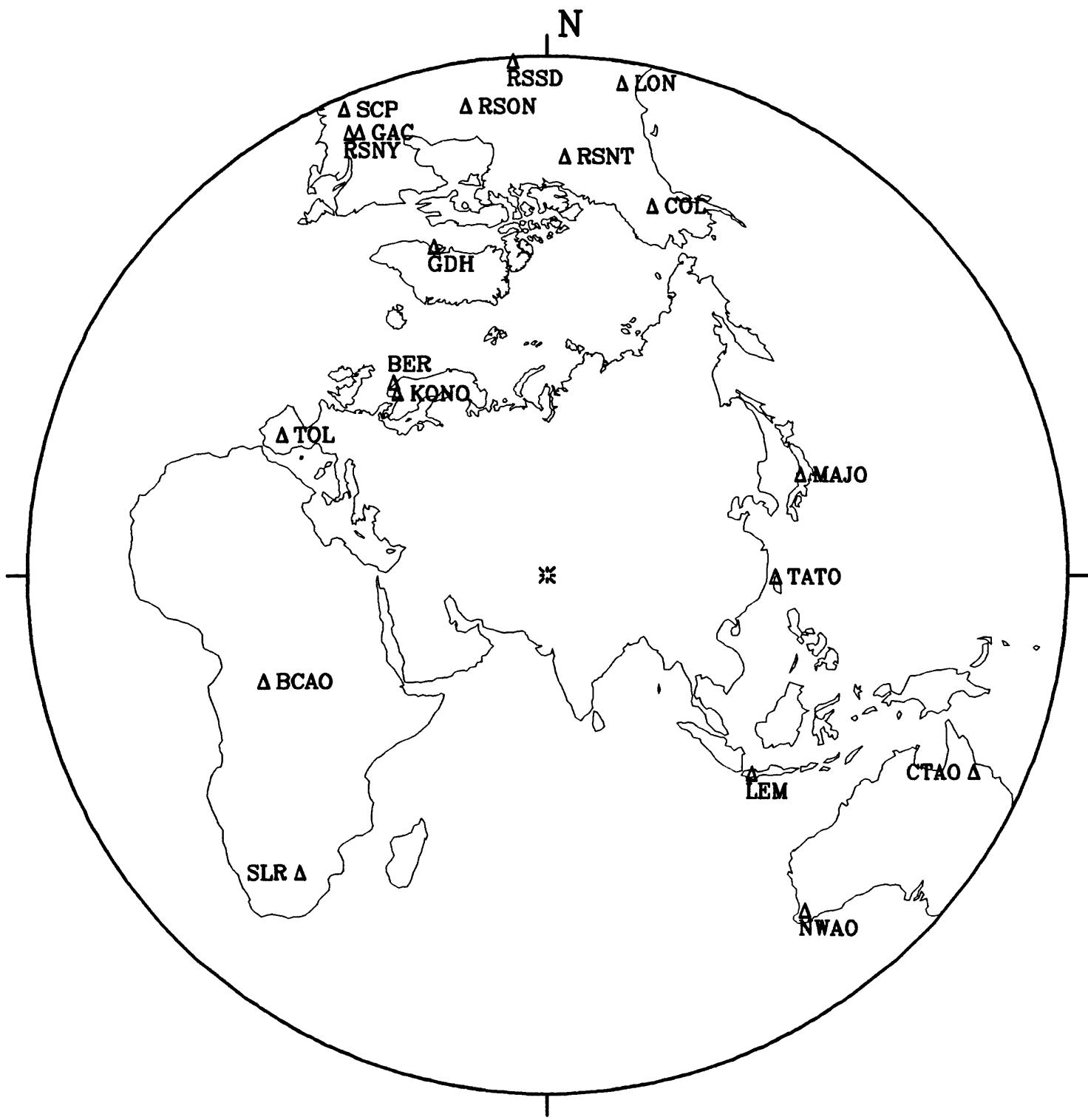
07 September 1983 19:22:05.15
Southern Alaska h=45.0 MB=6.2 ms=6.2

LPZ 221



12 September 1983 15:42:08.55

Afghanistan–USSR Border Region

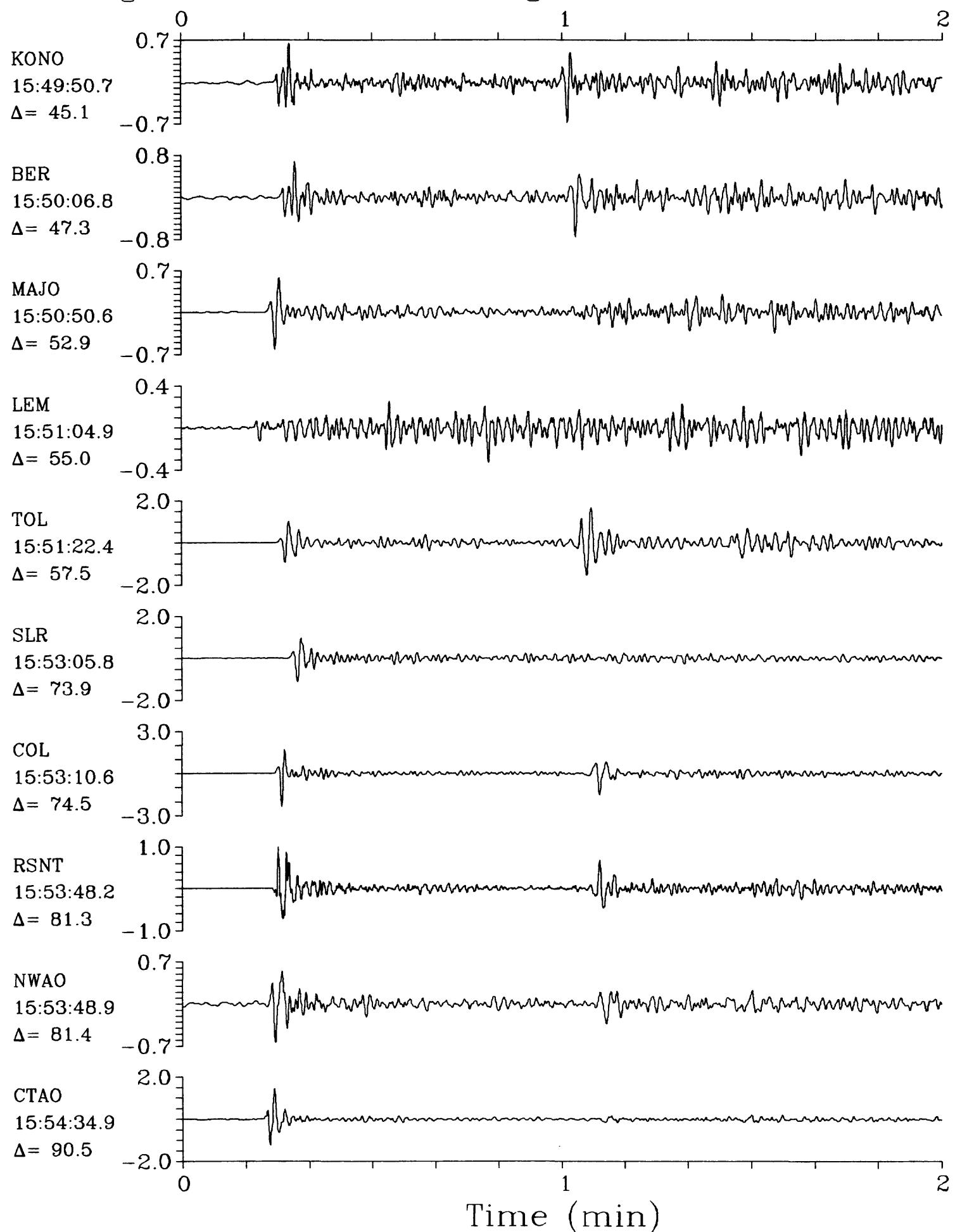


SPZ

12 September 1983 15:42:08.55

SPZ²²³

Afghanistan-USSR Border Region h=208.8 MB=6.1

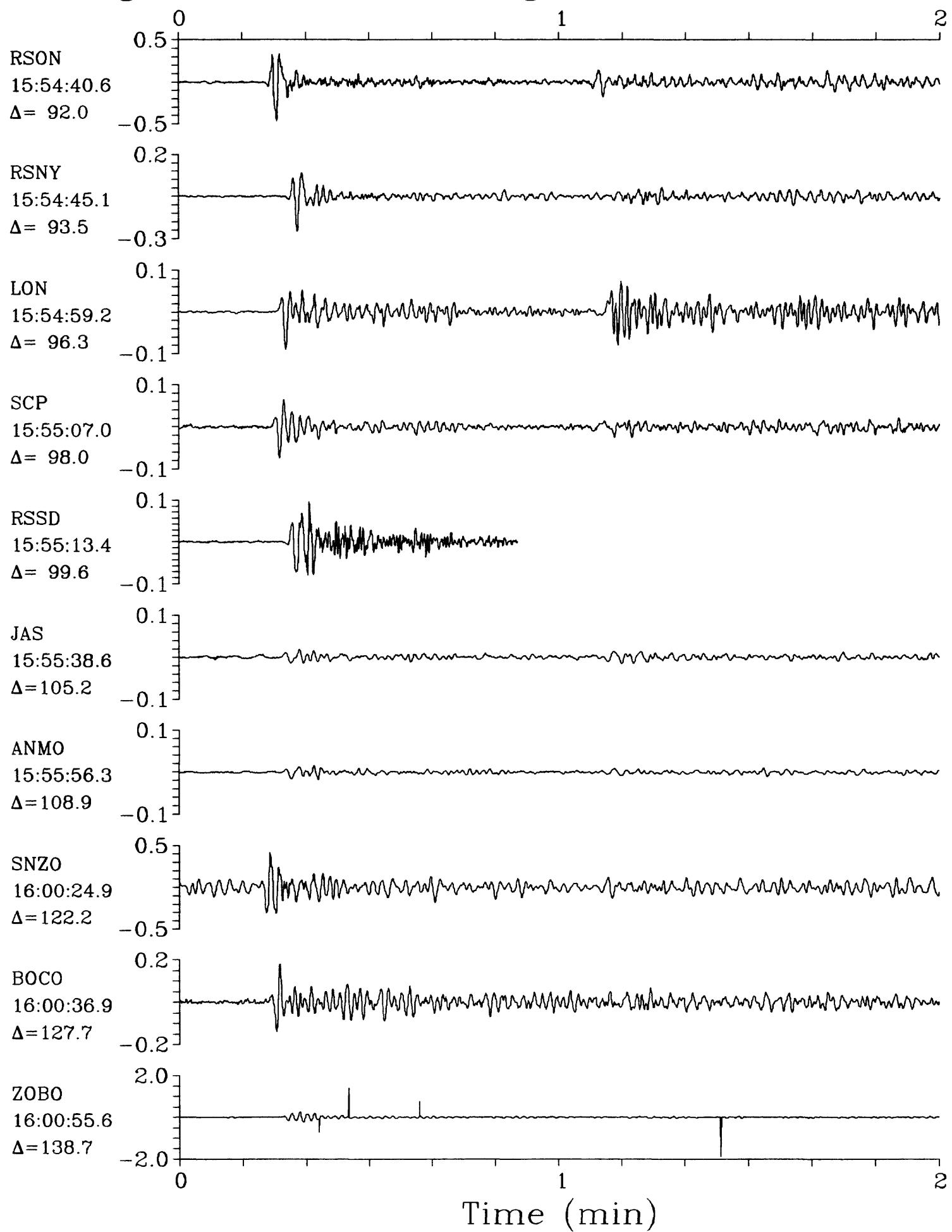


²²⁴SPZ

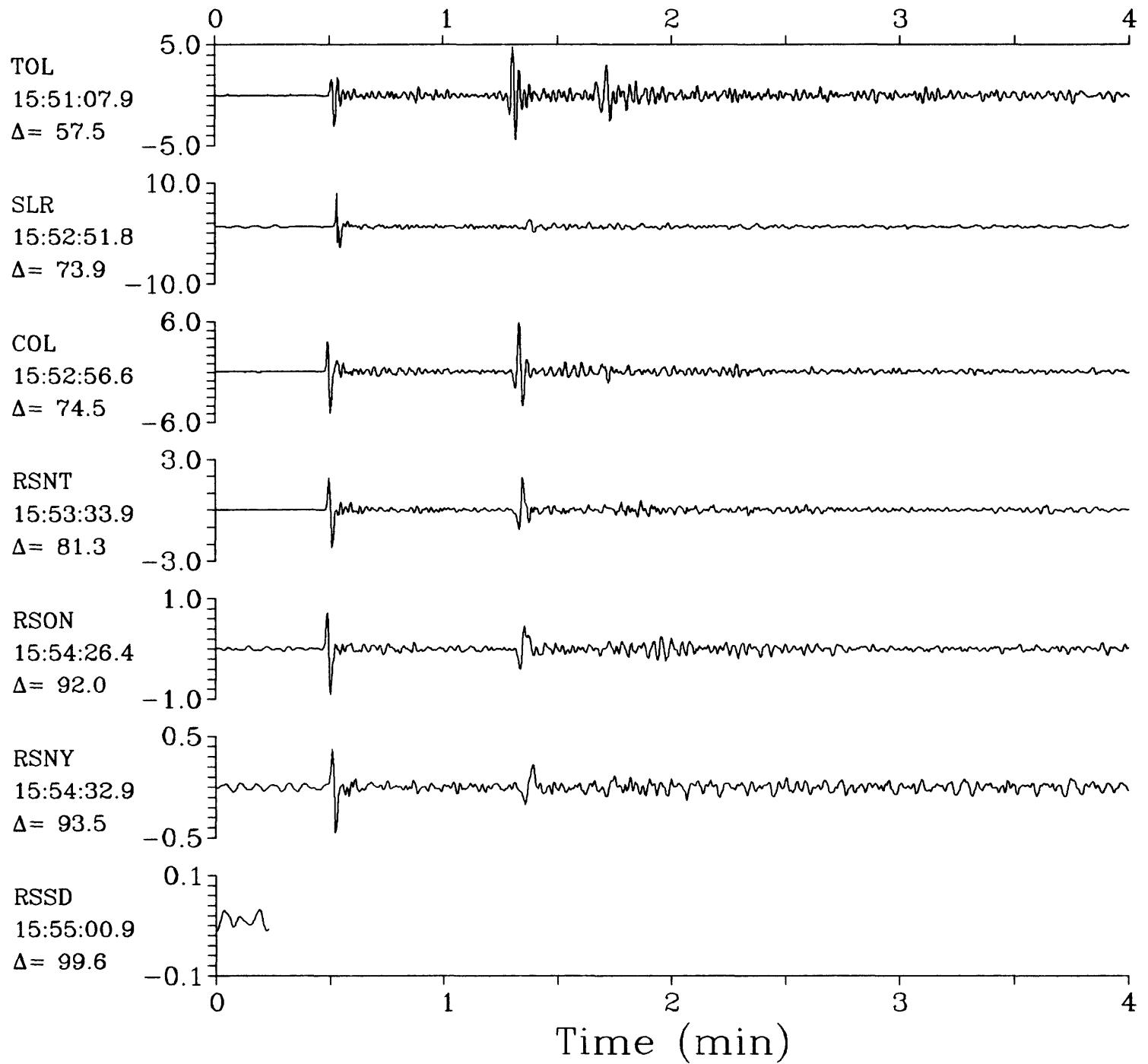
12 September 1983 15:42:08.55

SPZ

Afghanistan-USSR Border Region h=208.8 MB=6.1



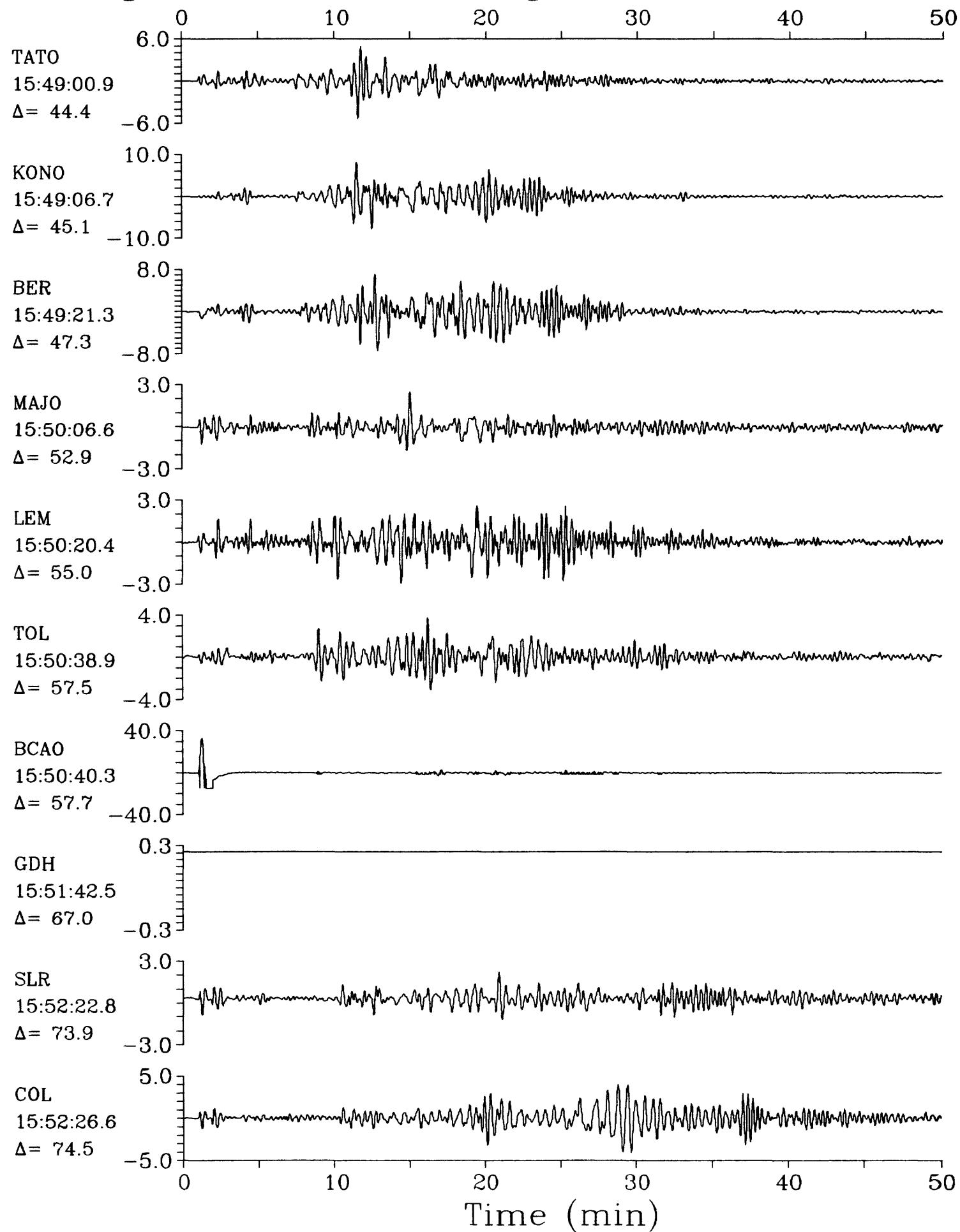
IPZ 12 September 1983 15:42:08.55 IPZ²²⁵
Afghanistan-USSR Border Region h=208.8 MB=6.1



226 LPZ

12 September 1983 15:42:08.55
Afghanistan-USSR Border Region h=208.8 MB=6.1

LPZ

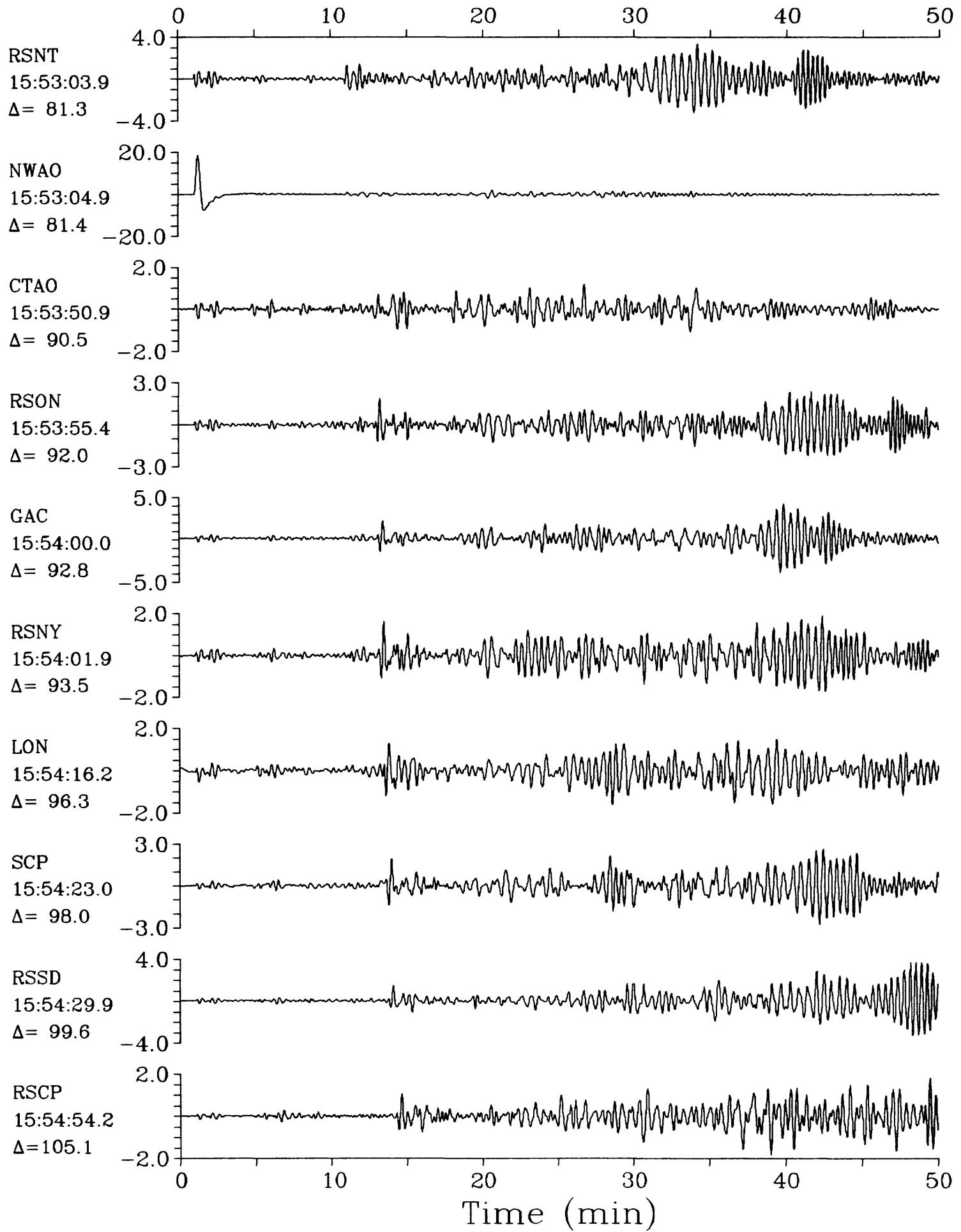


LPZ

12 September 1983 15:42:08.55

LPZ 227

Afghanistan-USSR Border Region h=208.8 MB=6.1

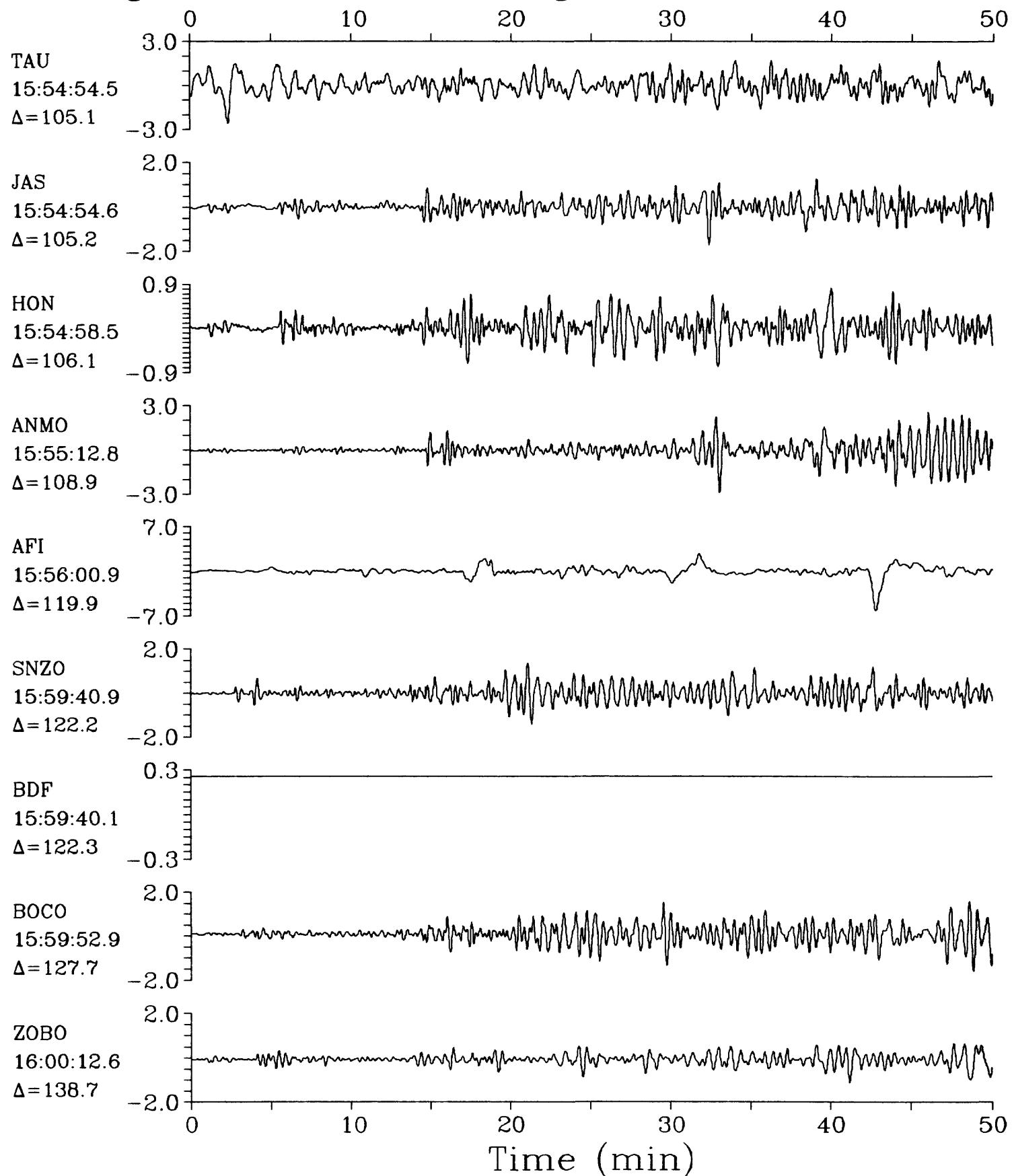


228 LPZ

12 September 1983 15:42:08.55

LPZ

Afghanistan-USSR Border Region h=208.8 MB=6.1



04 October 1983 18:52:13.30

Near Coast of Northern Chile

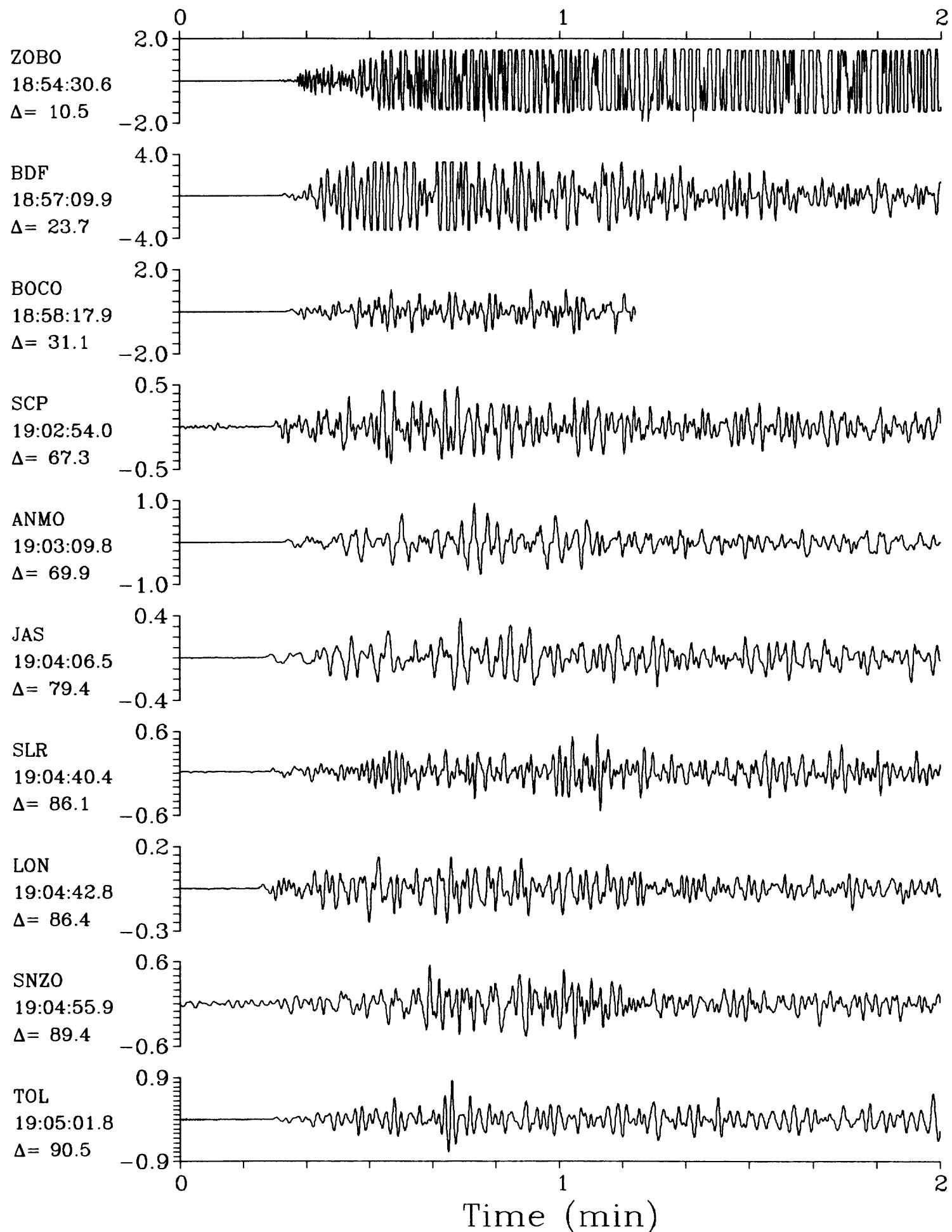


230 SPZ

04 October 1983 18:52:13.30

SPZ

Near Coast of Northern Chile h=14.8 MB=6.4 ms=7.3

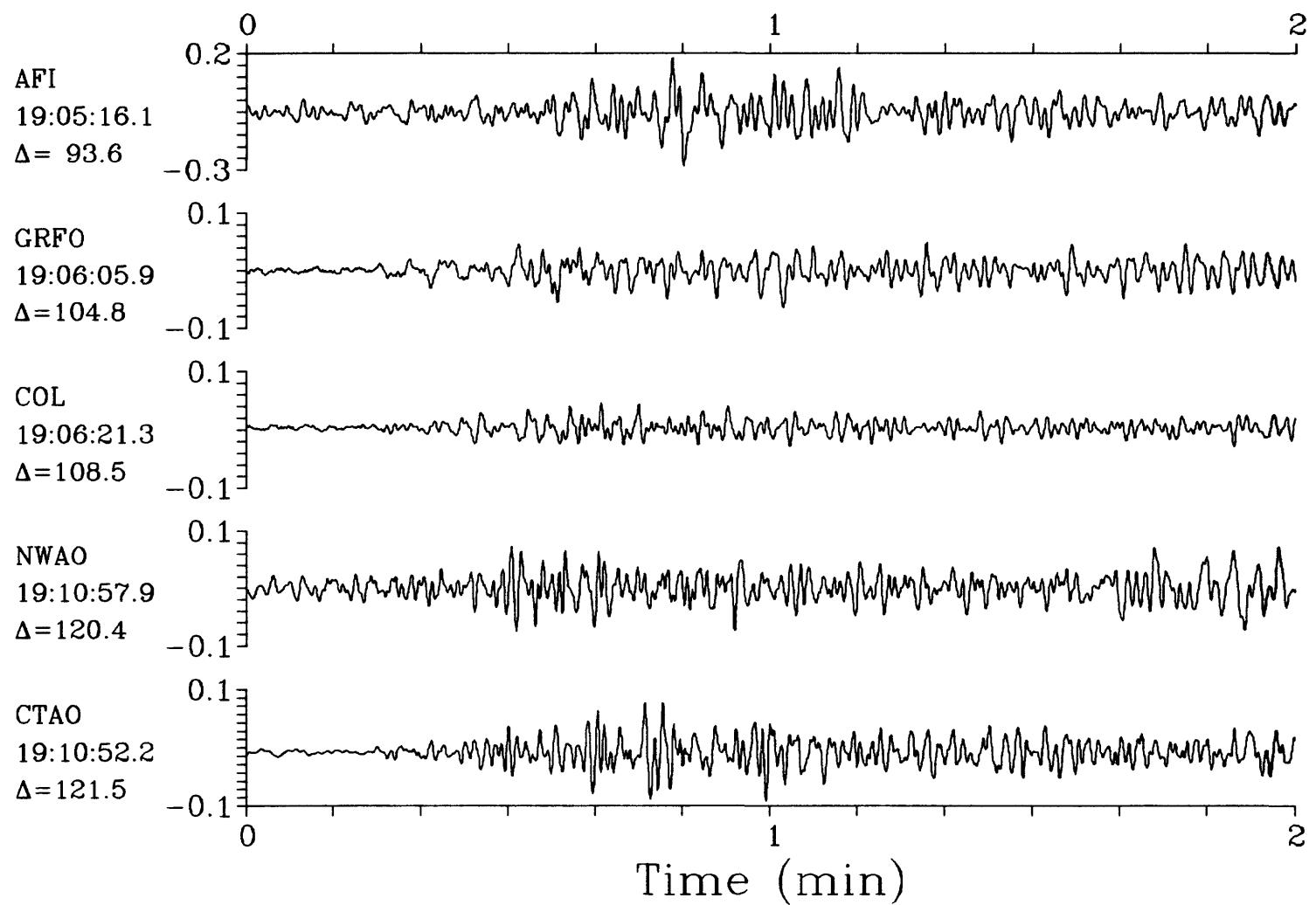


SPZ

04 October 1983 18:52:13.30

SPZ²³¹

Near Coast of Northern Chile h=14.8 MB=6.4 ms=7.3

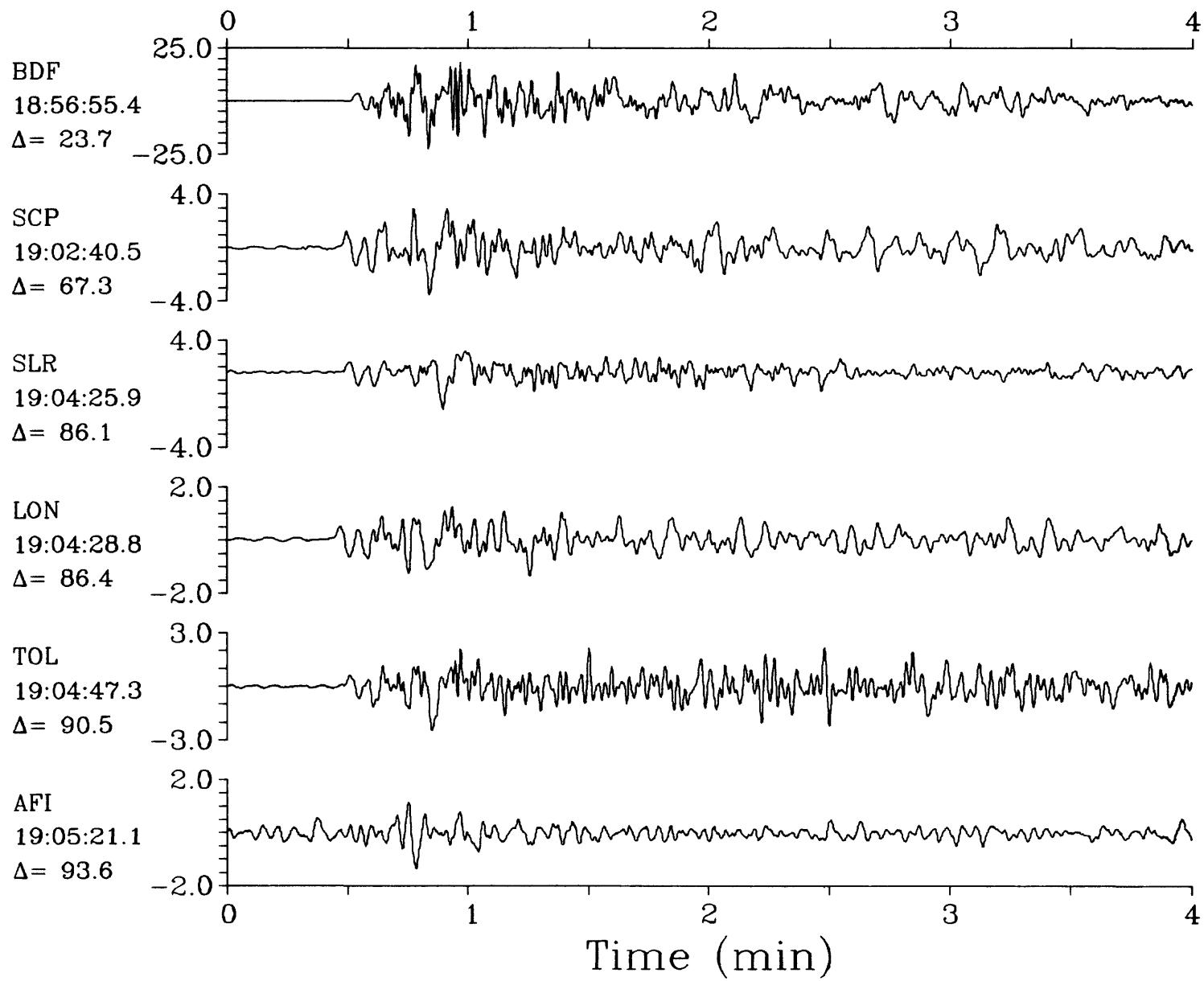


²³²IPZ

04 October 1983 18:52:13.30

IPZ

Near Coast of Northern Chile h=14.8 MB=6.4 ms=7.3

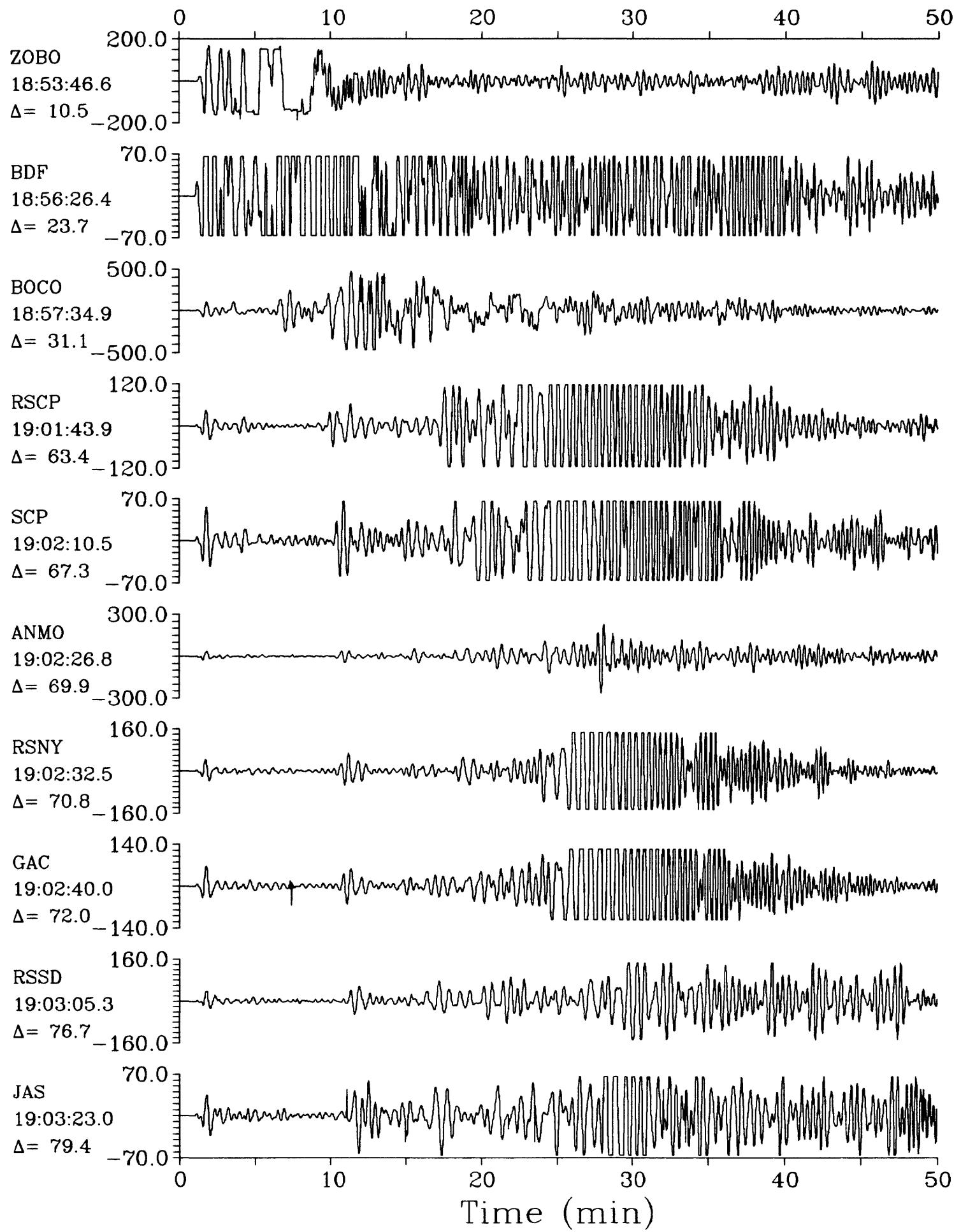


LPZ

04 October 1983 18:52:13.30

LPZ²³³

Near Coast of Northern Chile h=14.8 MB=6.4 ms=7.3

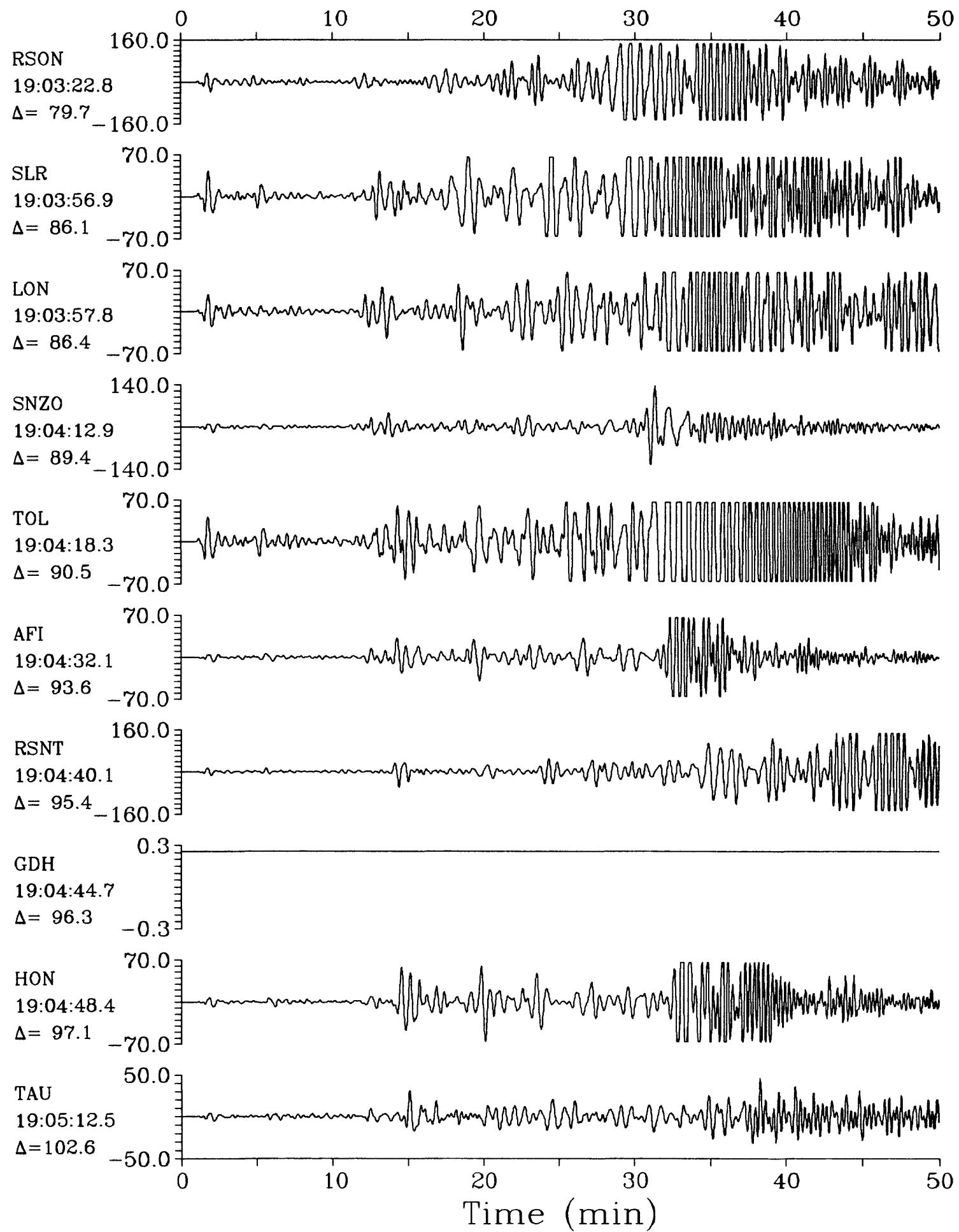


2³⁴ LPZ

04 October 1983 18:52:13.30

LPZ

Near Coast of Northern Chile h=14.8 MB=6.4 ms=7.3

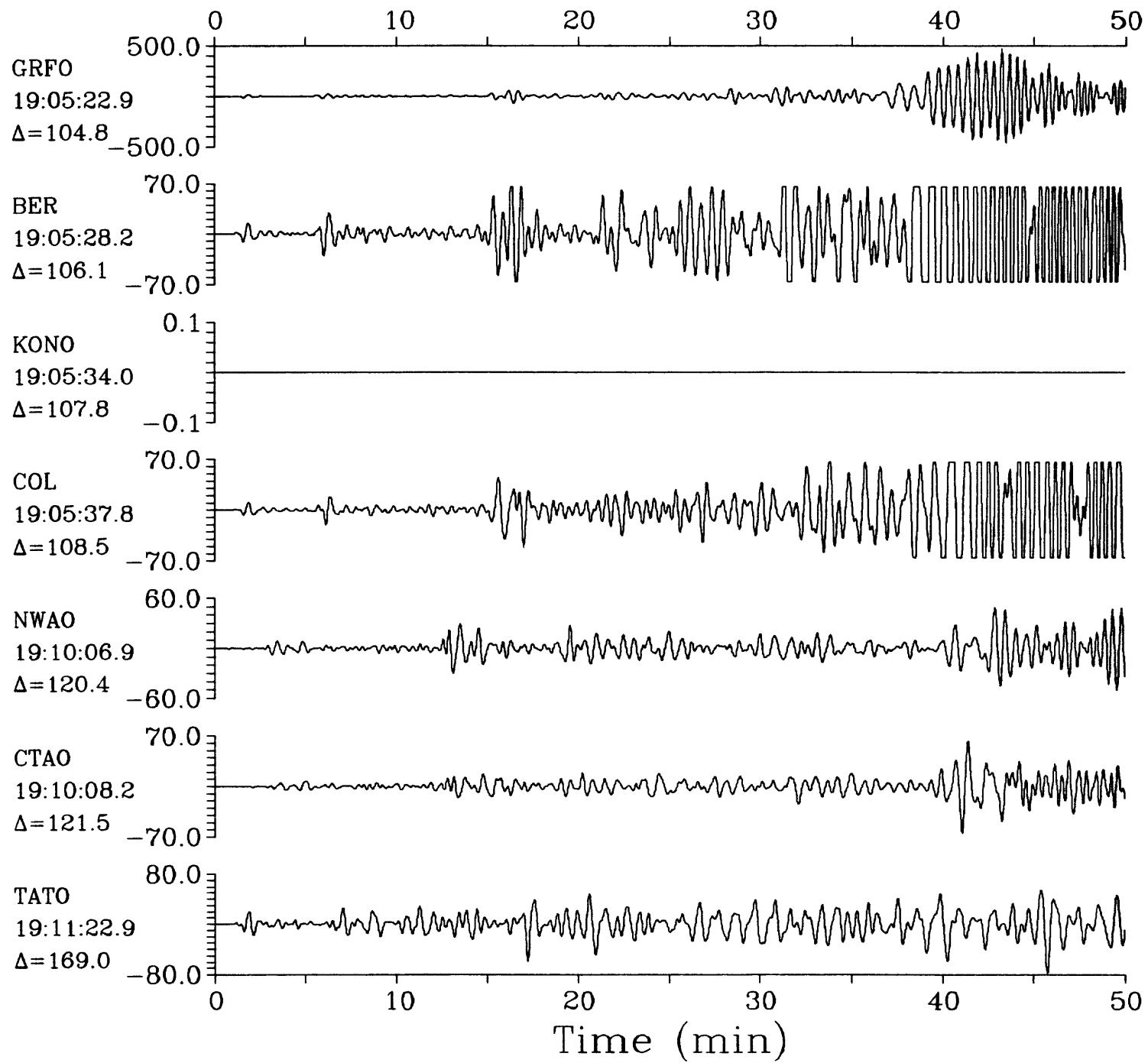


LPZ

04 October 1983 18:52:13.30

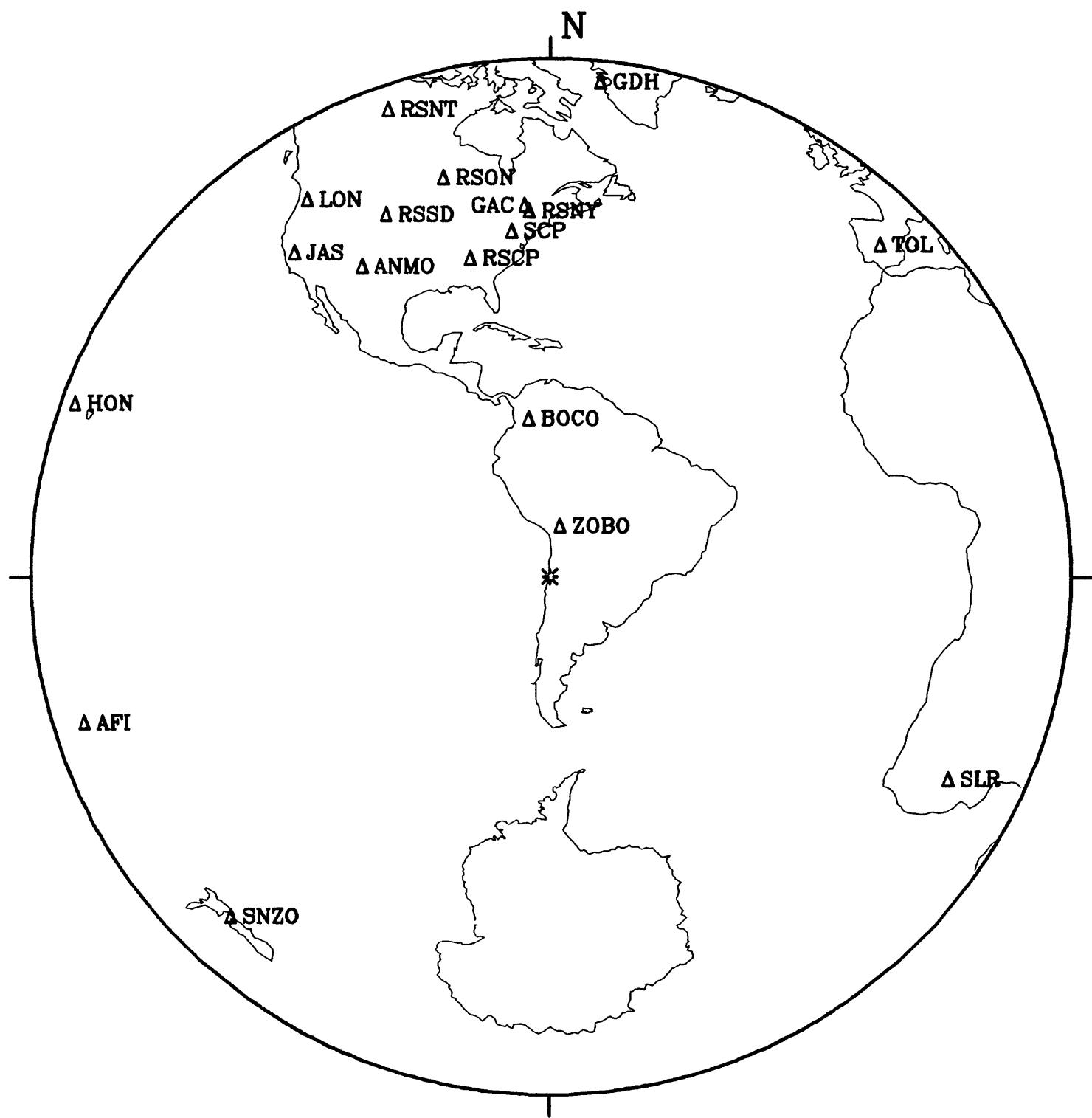
LPZ 235

Near Coast of Northern Chile h=14.8 MB=6.4 ms=7.3



09 October 1983 11:25:40.58

Near Coast of Northern Chile

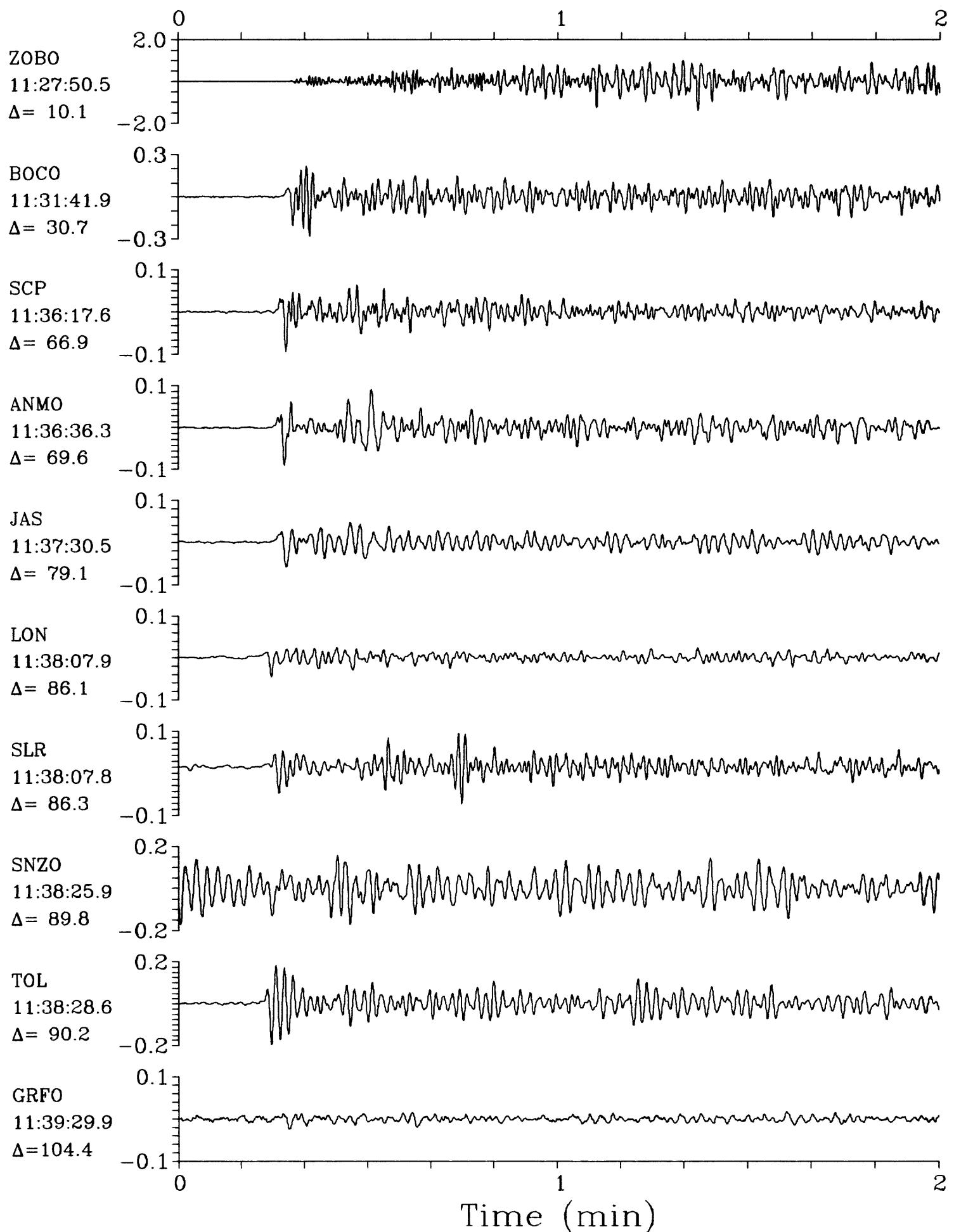


SPZ

09 October 1983 11:25:40.58

SPZ²³⁷

Near Coast of Northern Chile h=16.1 MB=5.9 ms=6.2

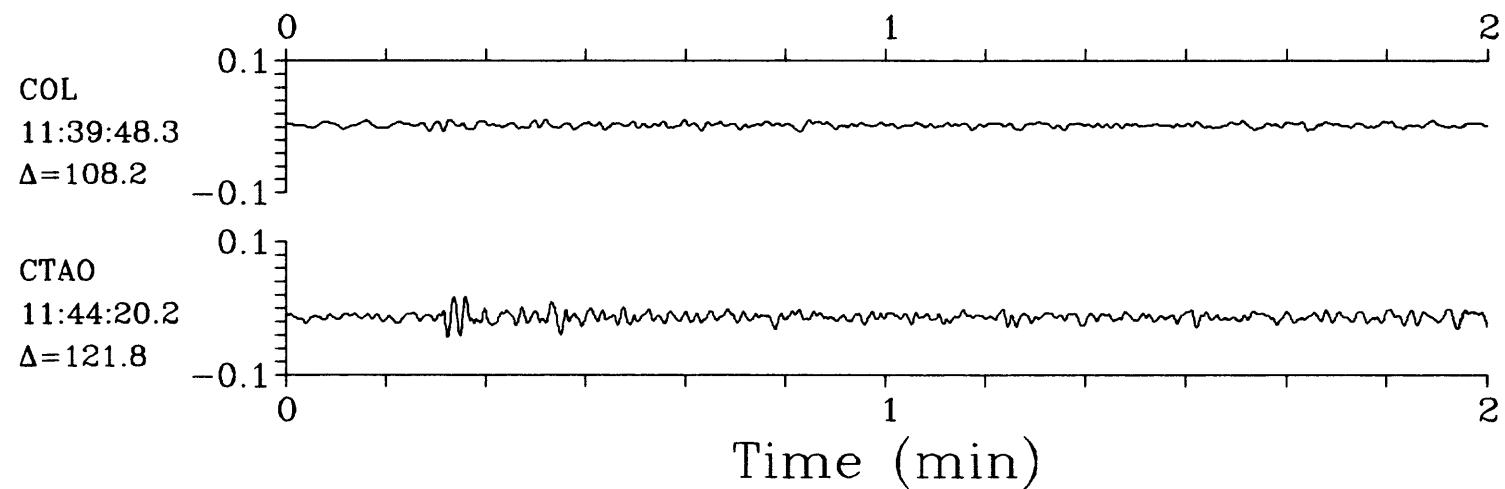


²³⁸SPZ

09 October 1983 11:25:40.58

SPZ

Near Coast of Northern Chile h=16.1 MB=5.9 ms=6.2

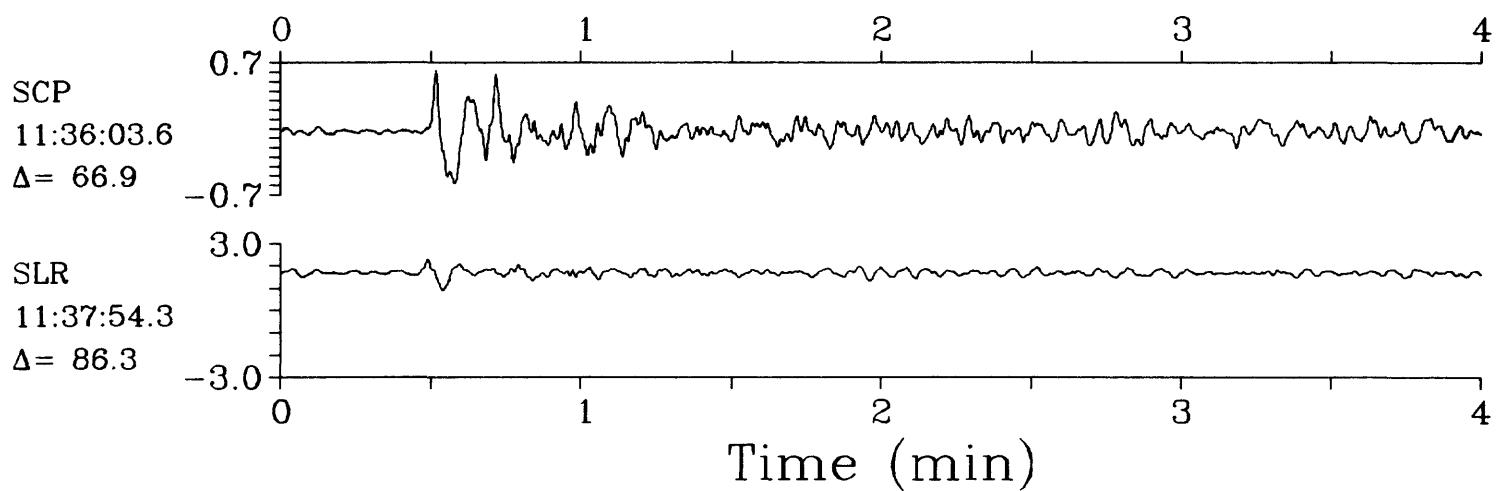


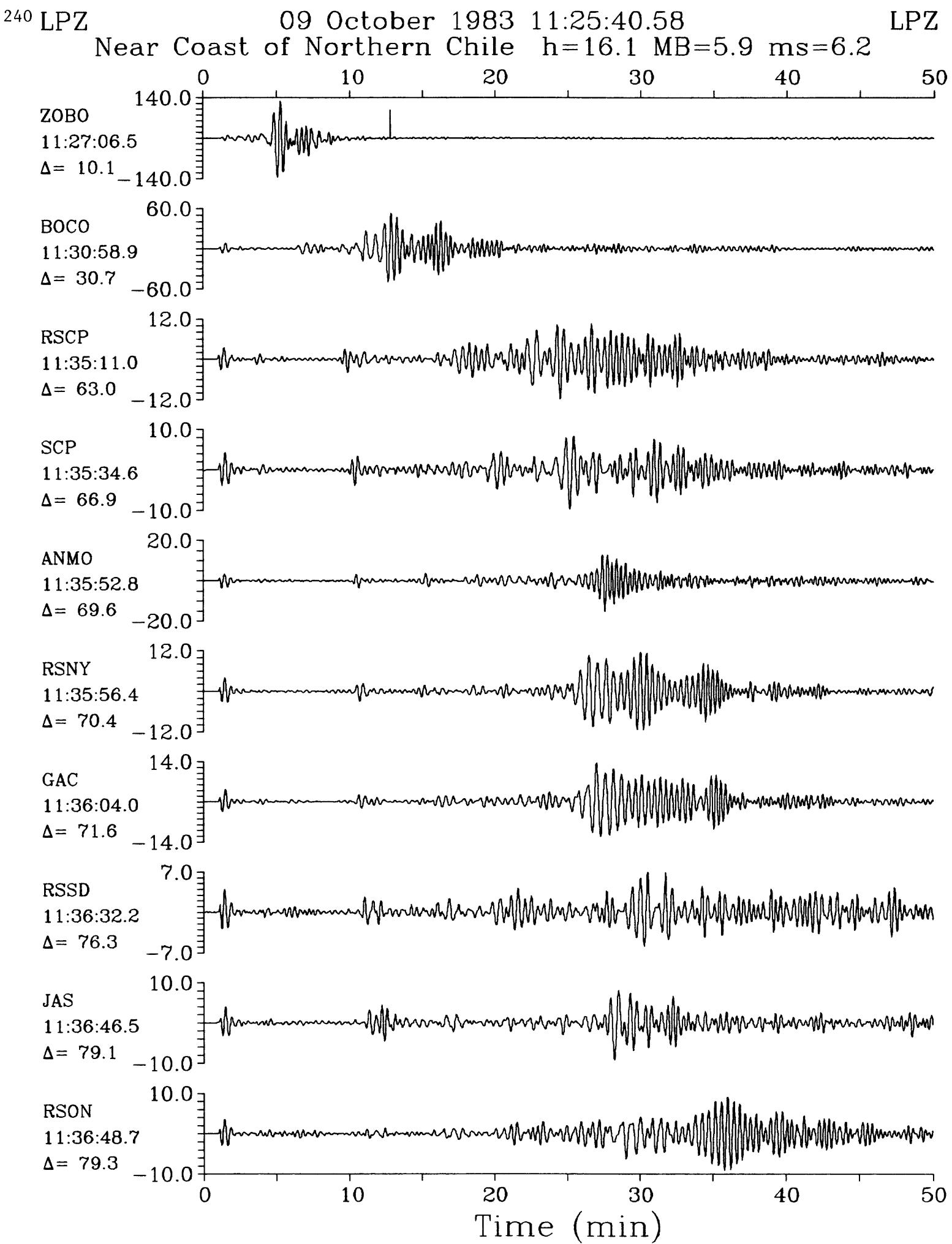
IPZ

09 October 1983 11:25:40.58

IPZ²³⁹

Near Coast of Northern Chile h=16.1 MB=5.9 ms=6.2



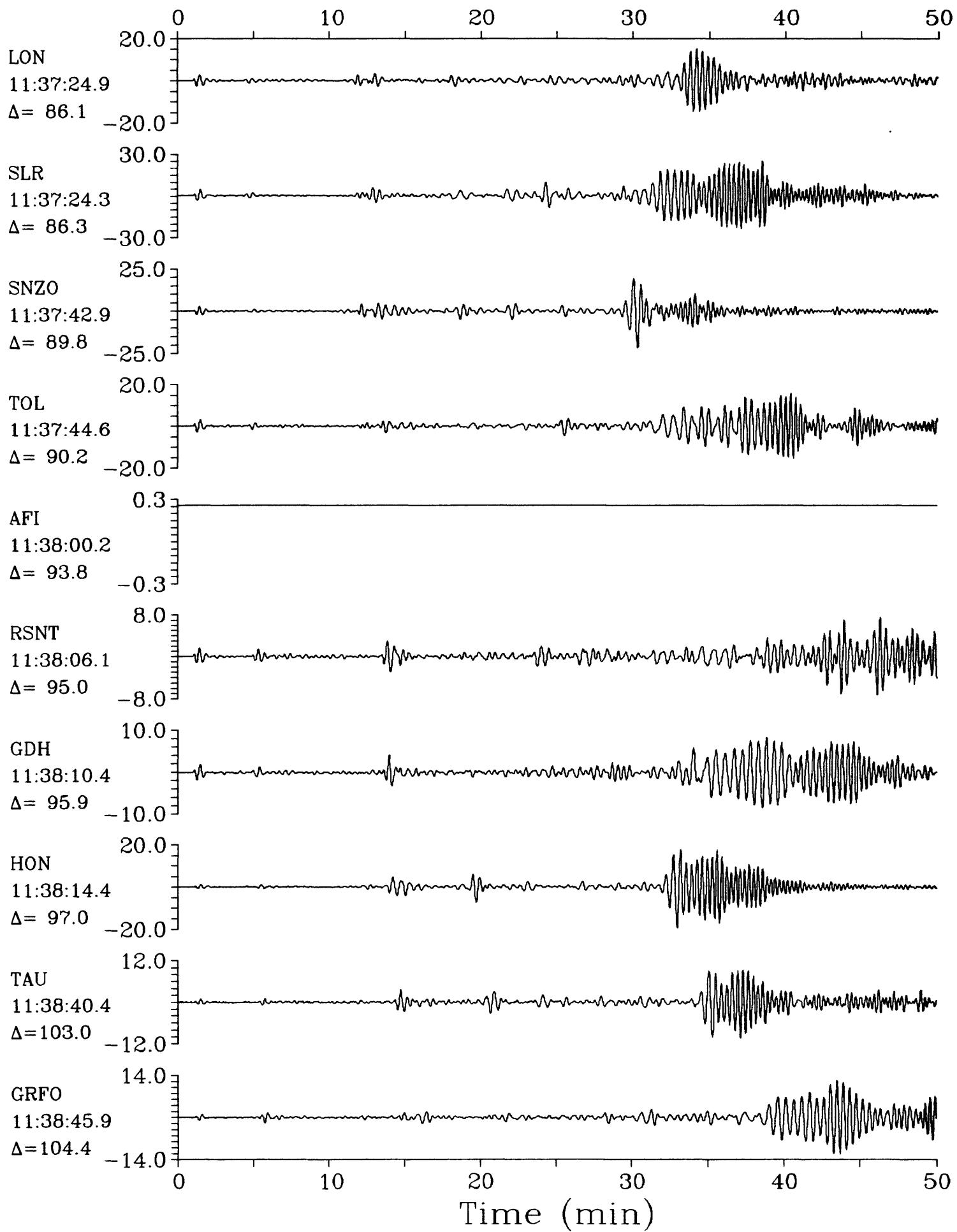


LPZ

09 October 1983 11:25:40.58

LPZ²⁴¹

Near Coast of Northern Chile h=16.1 MB=5.9 ms=6.2

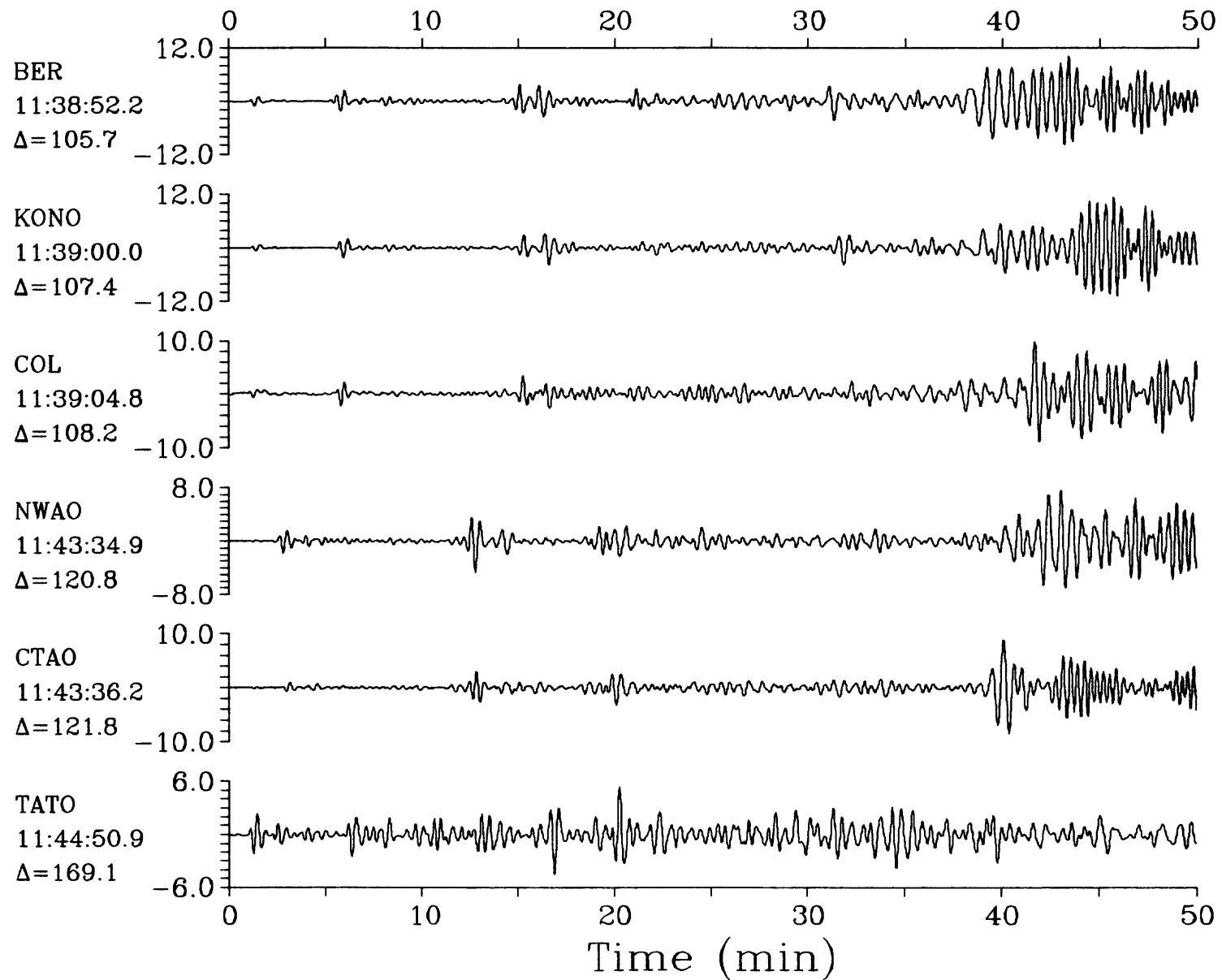


242 LPZ

09 October 1983 11:25:40.58

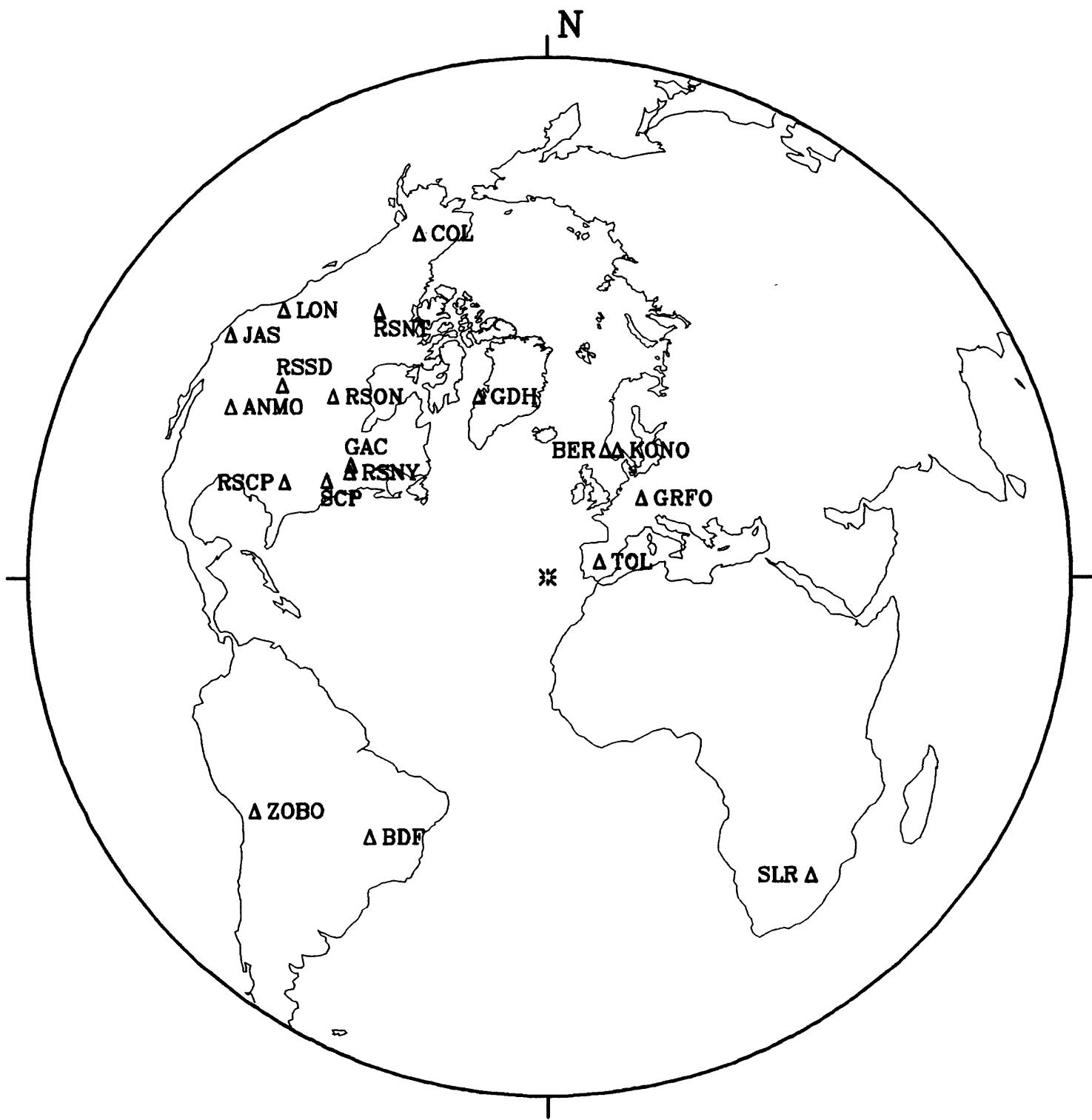
LPZ

Near Coast of Northern Chile h=16.1 MB=5.9 ms=6.2



17 October 1983 19:36:21.47

North Atlantic Ocean

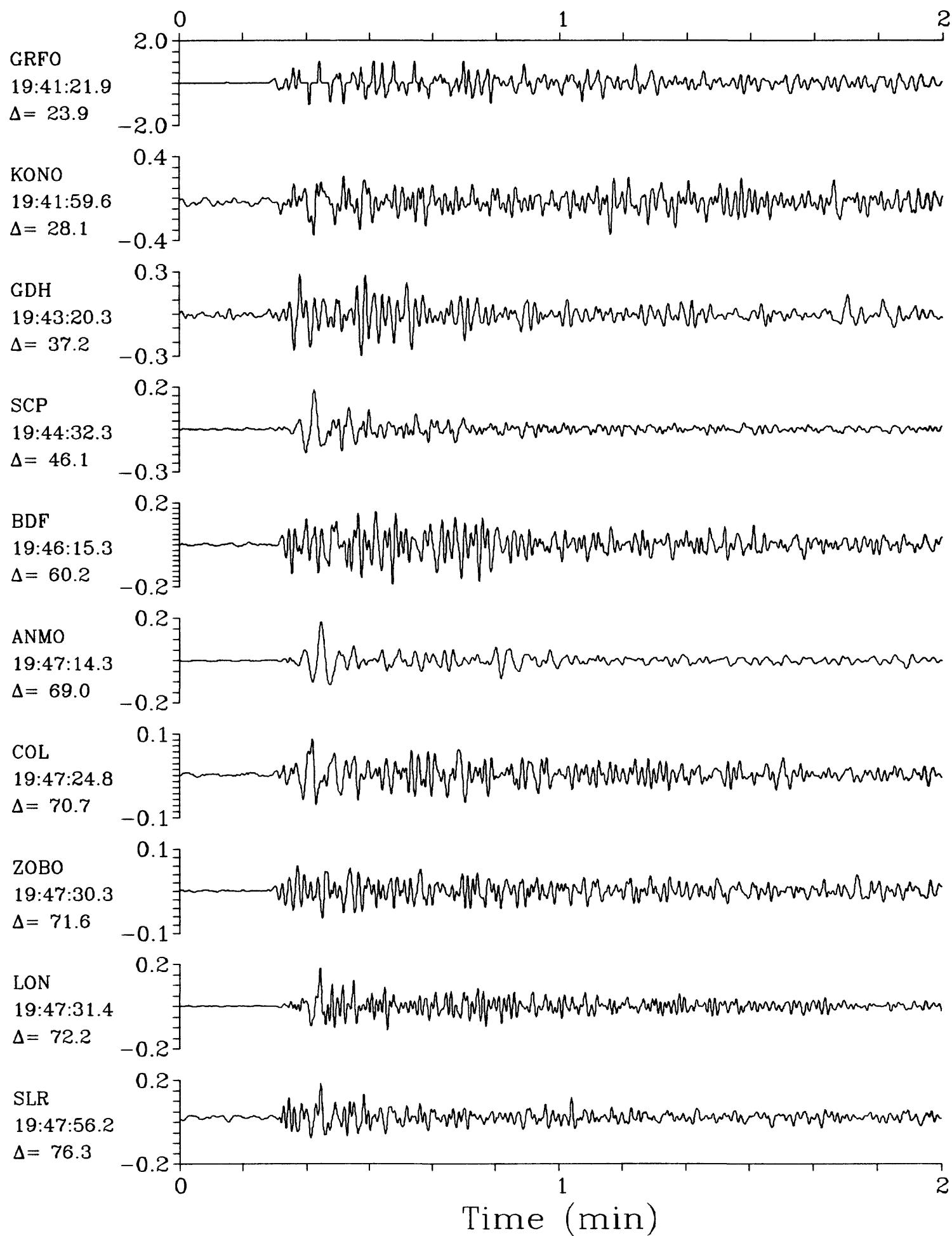


244 SPZ

17 October 1983 19:36:21.47

SPZ

North Atlantic Ocean h=10.0 MB=6.0 ms=6.3

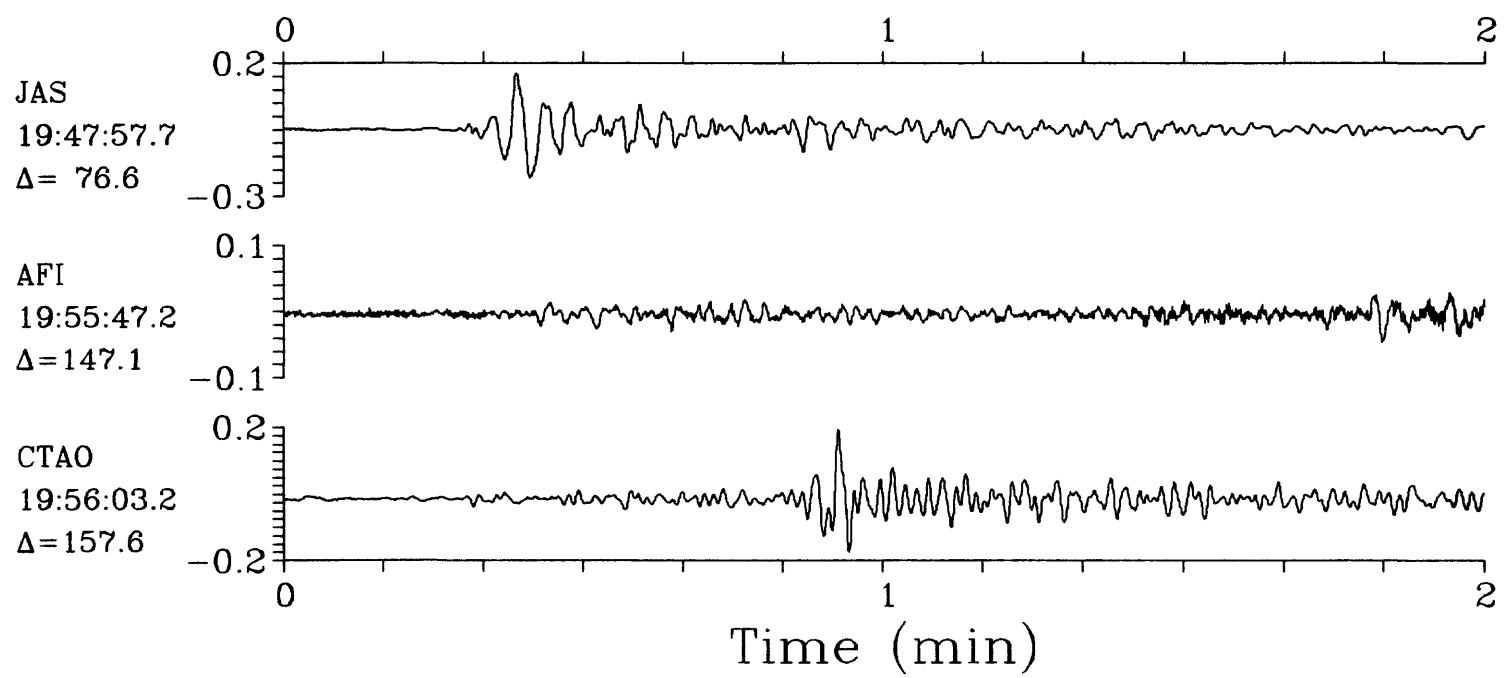


SPZ

17 October 1983 19:36:21.47

SPZ²⁴⁵

North Atlantic Ocean h=10.0 MB=6.0 ms=6.3

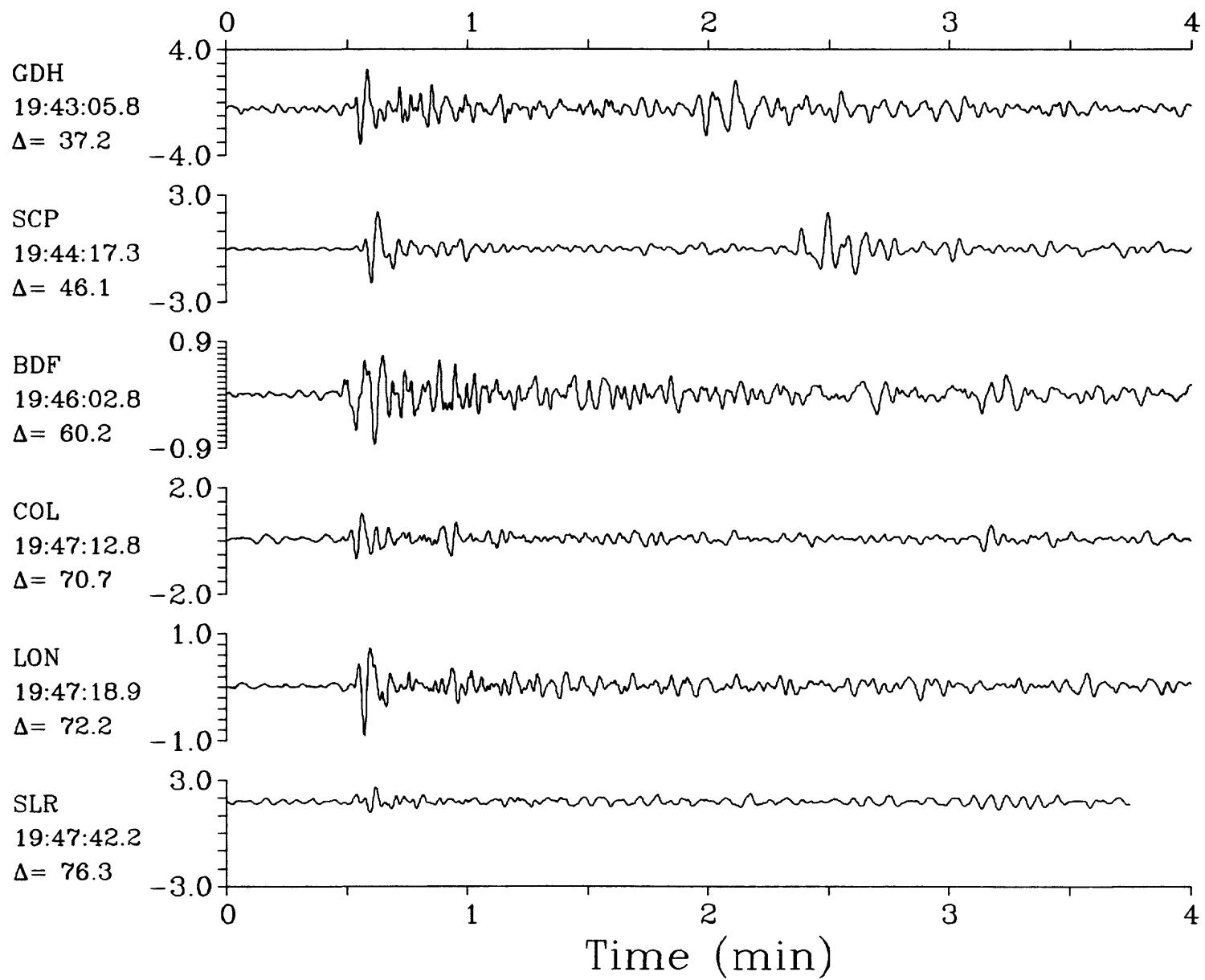


246 IPZ

17 October 1983 19:36:21.47

IPZ

North Atlantic Ocean h=10.0 MB=6.0 ms=6.3

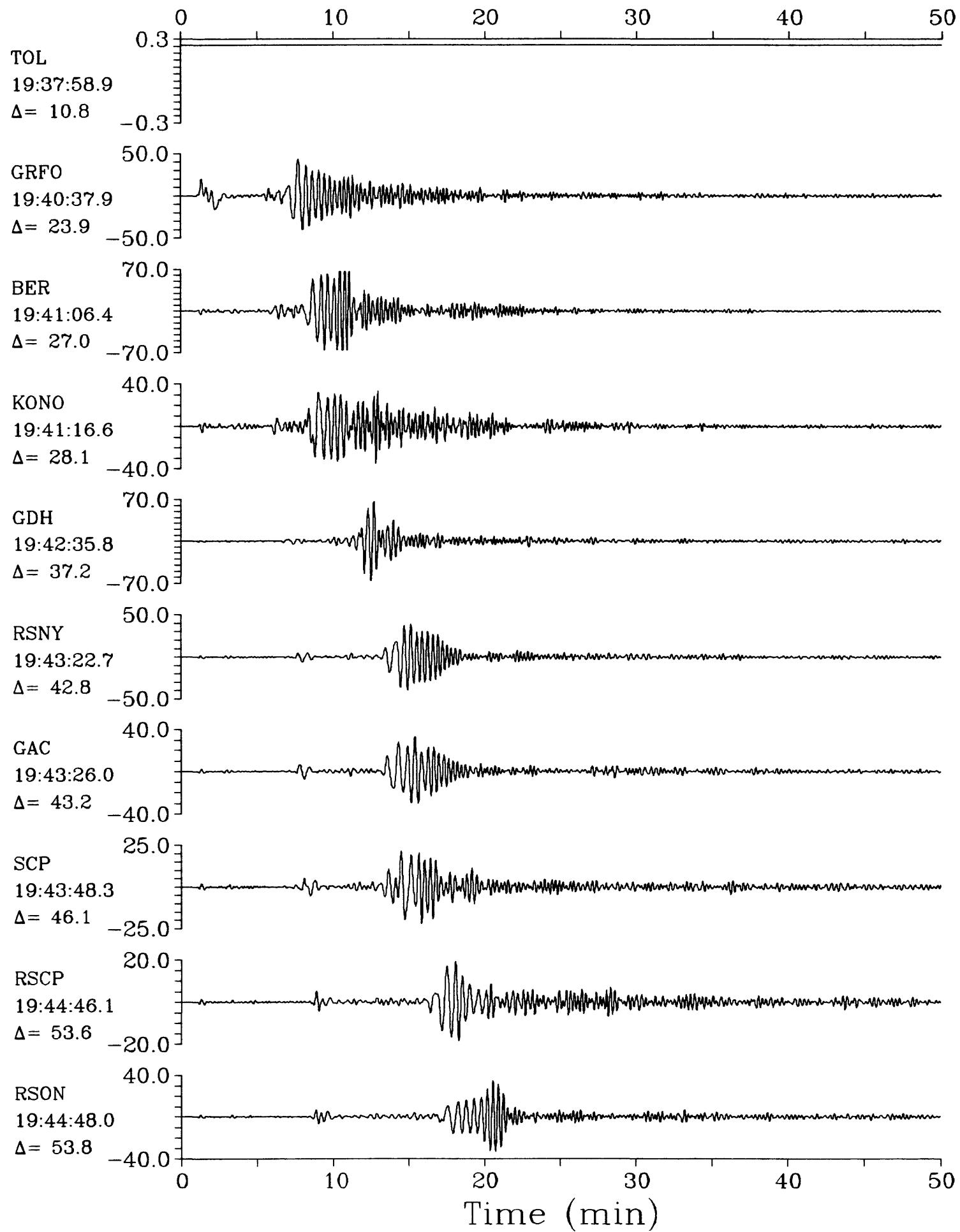


LPZ

17 October 1983 19:36:21.47

LPZ²⁴⁷

North Atlantic Ocean h=10.0 MB=6.0 ms=6.3

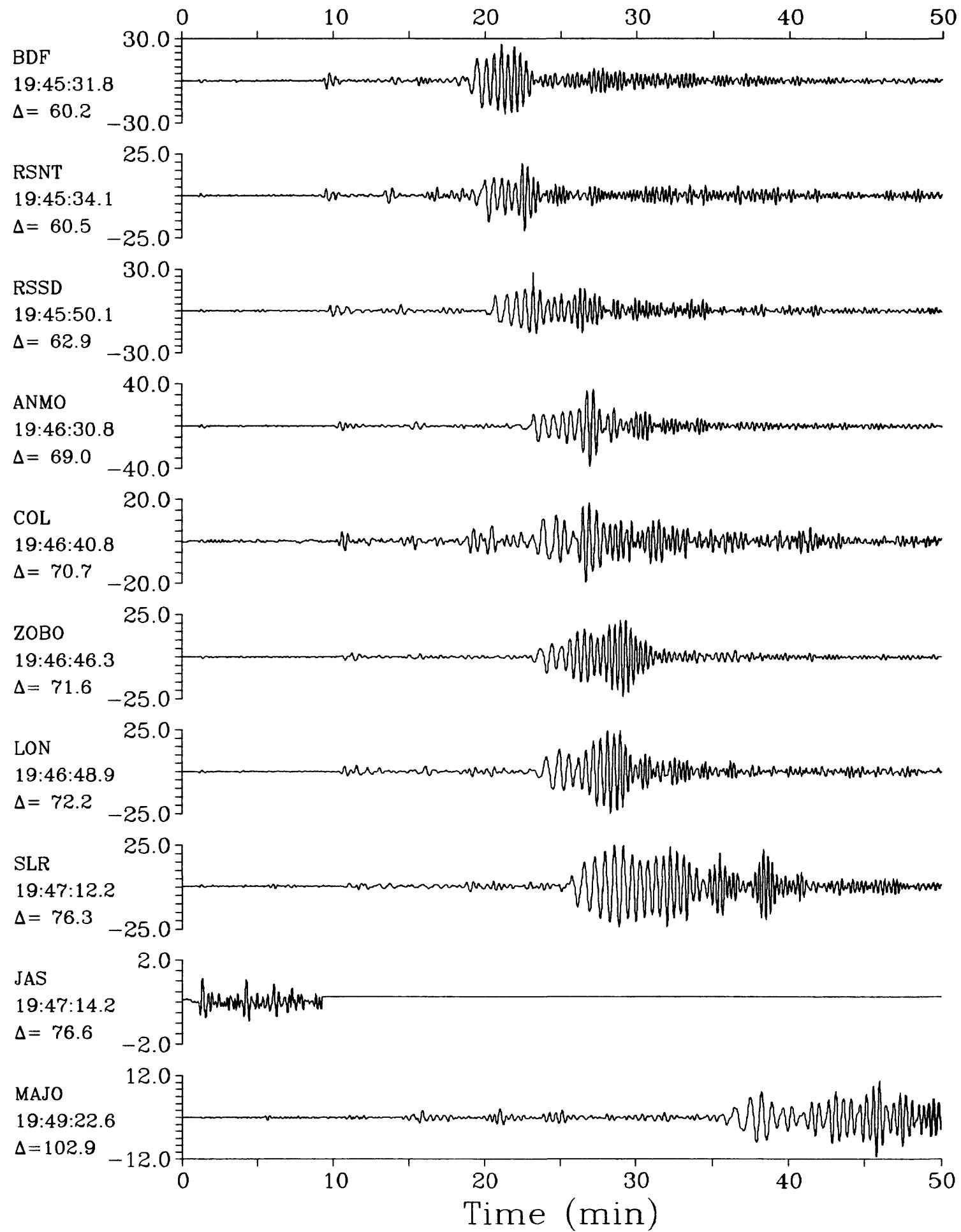


248 LPZ

17 October 1983 19:36:21.47

LPZ

North Atlantic Ocean h=10.0 MB=6.0 ms=6.3

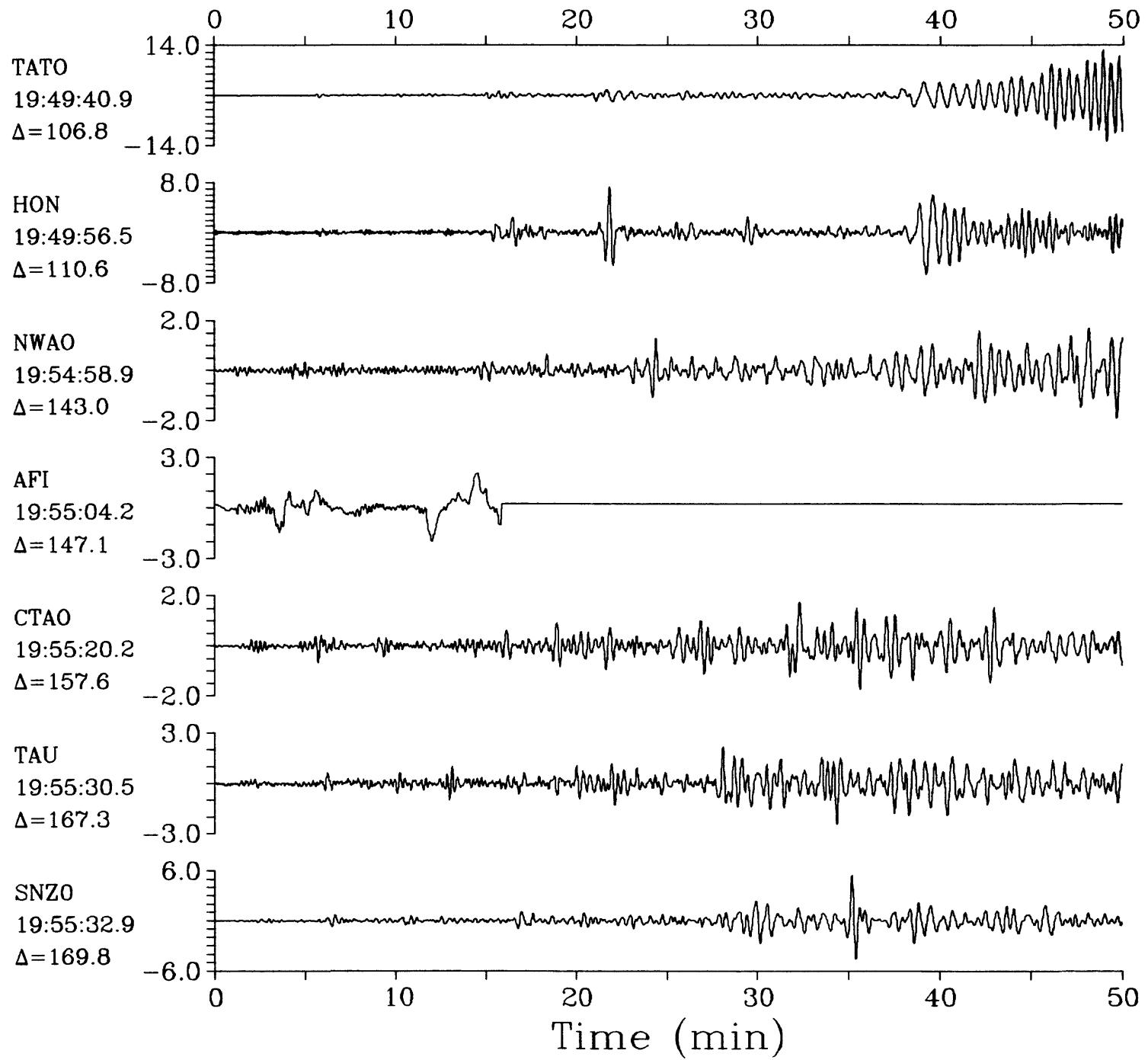


LPZ

17 October 1983 19:36:21.47

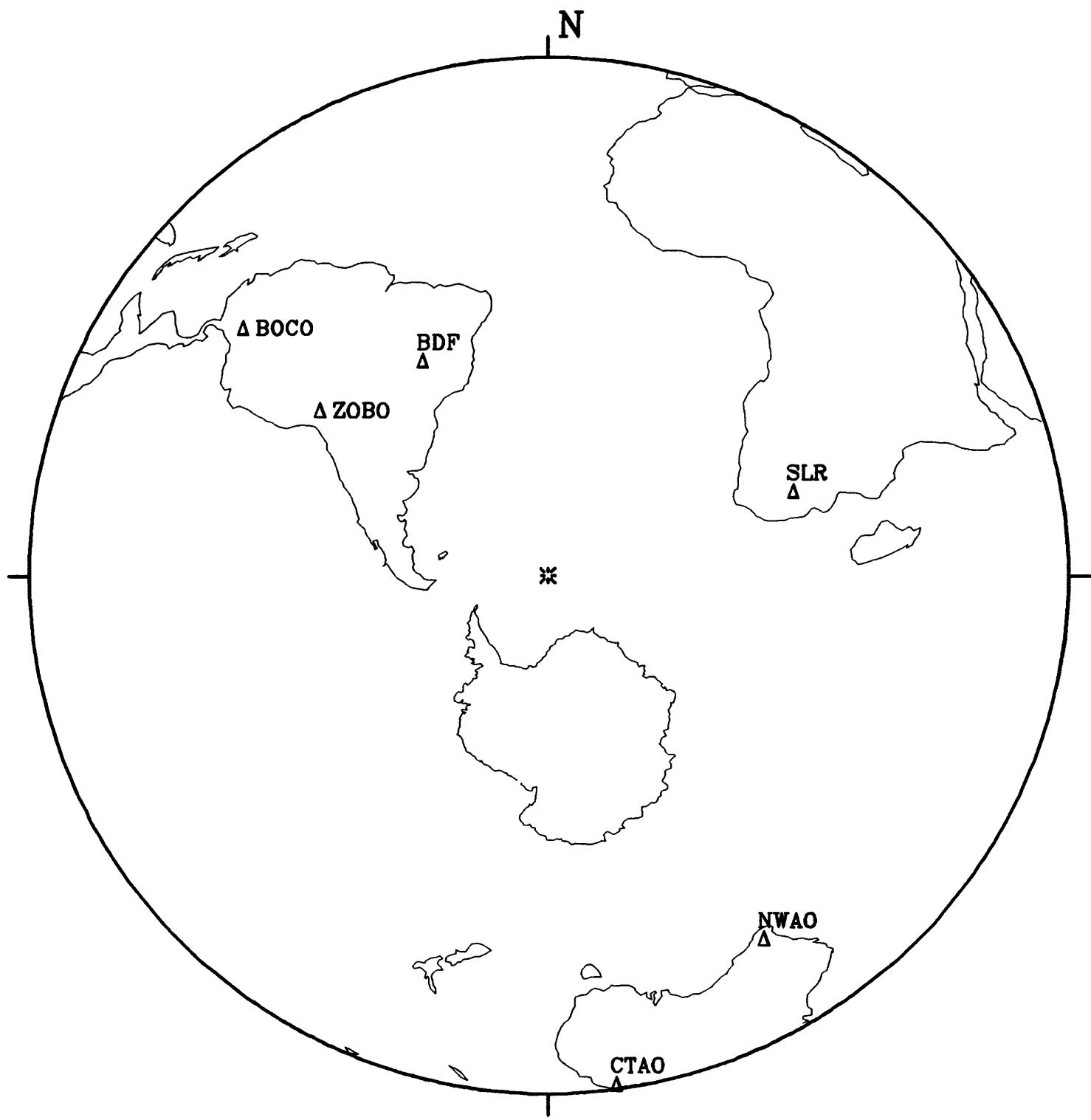
LPZ 249

North Atlantic Ocean h=10.0 MB=6.0 ms=6.3



22 October 1983 04:21:35.01

South Sandwich Islands Region

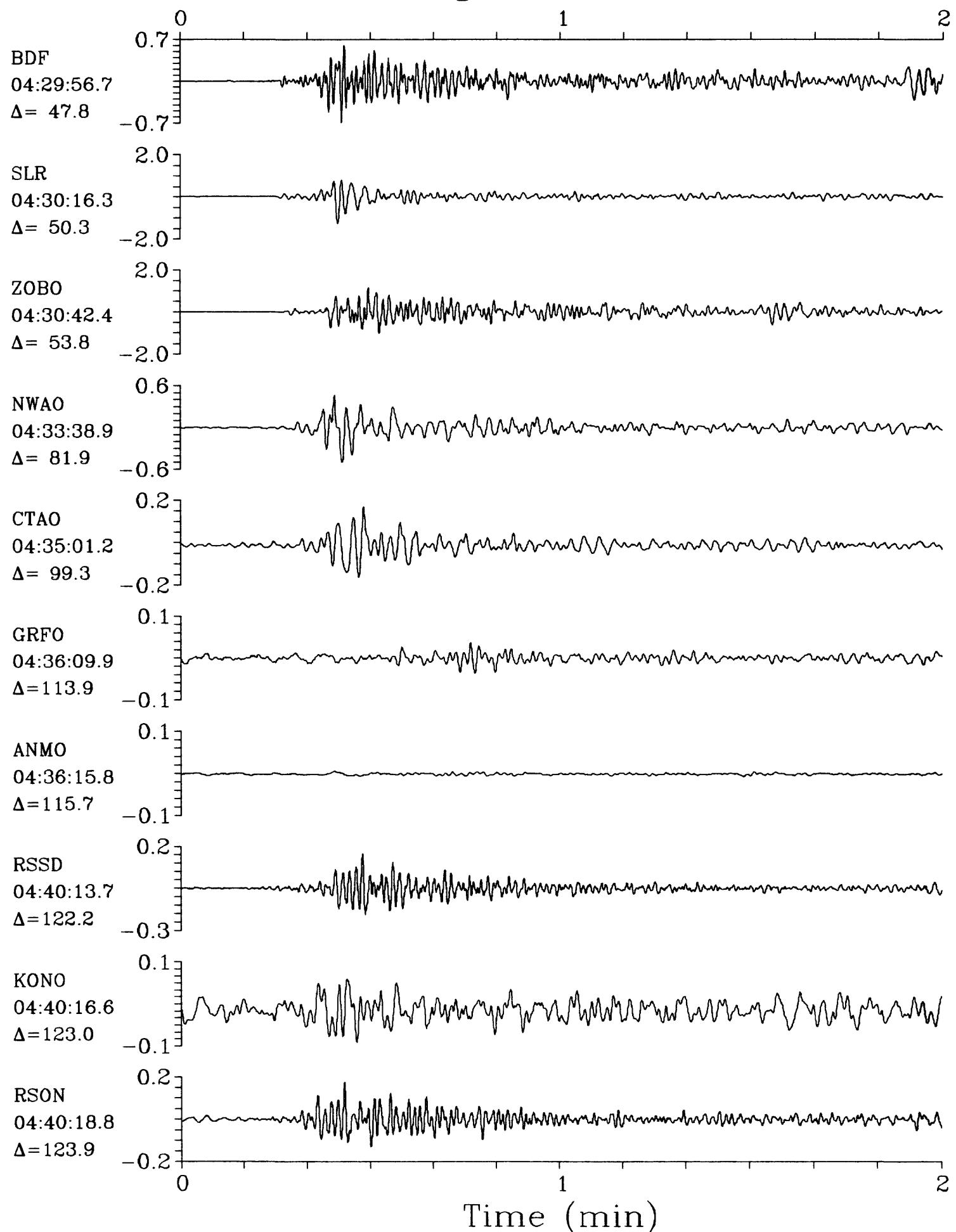


SPZ

22 October 1983 04:21:35.01

SPZ²⁵¹

South Sandwich Islands Region h=24.0 MB=6.5 ms=6.8

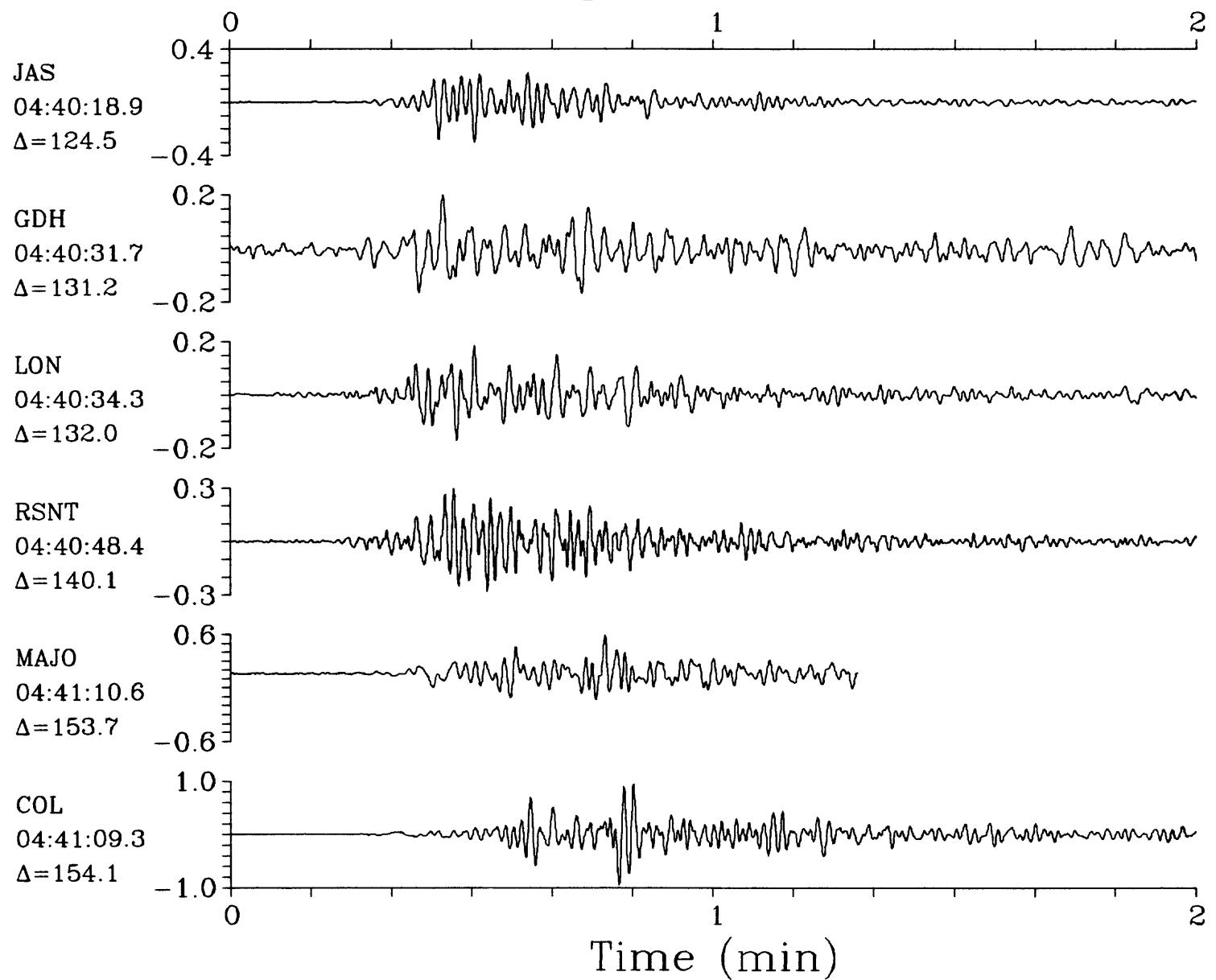


252 SPZ

22 October 1983 04:21:35.01

SPZ

South Sandwich Islands Region h=24.0 MB=6.5 ms=6.8

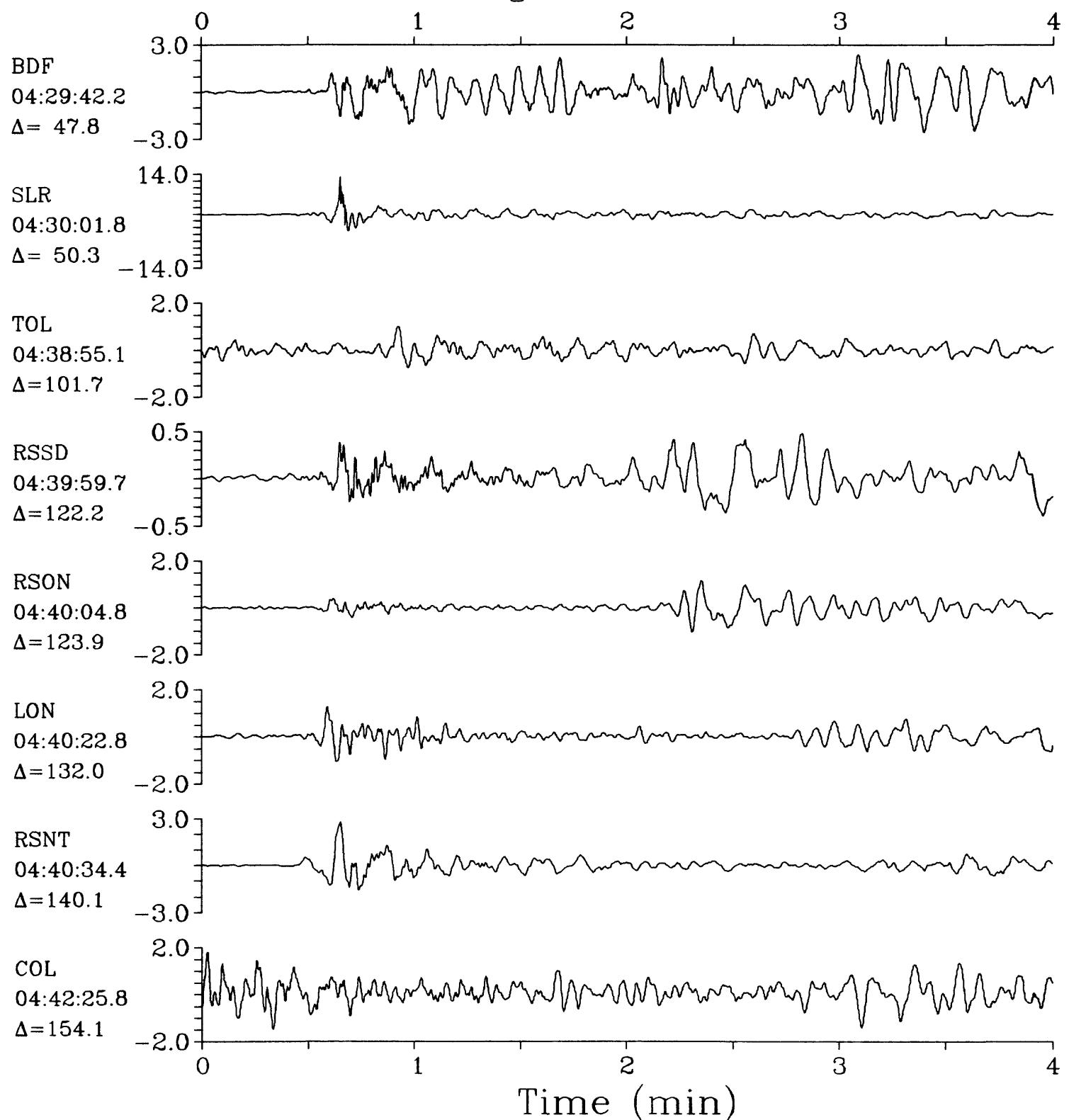


IPZ

22 October 1983 04:21:35.01

IPZ²⁵³

South Sandwich Islands Region h=24.0 MB=6.5 ms=6.8

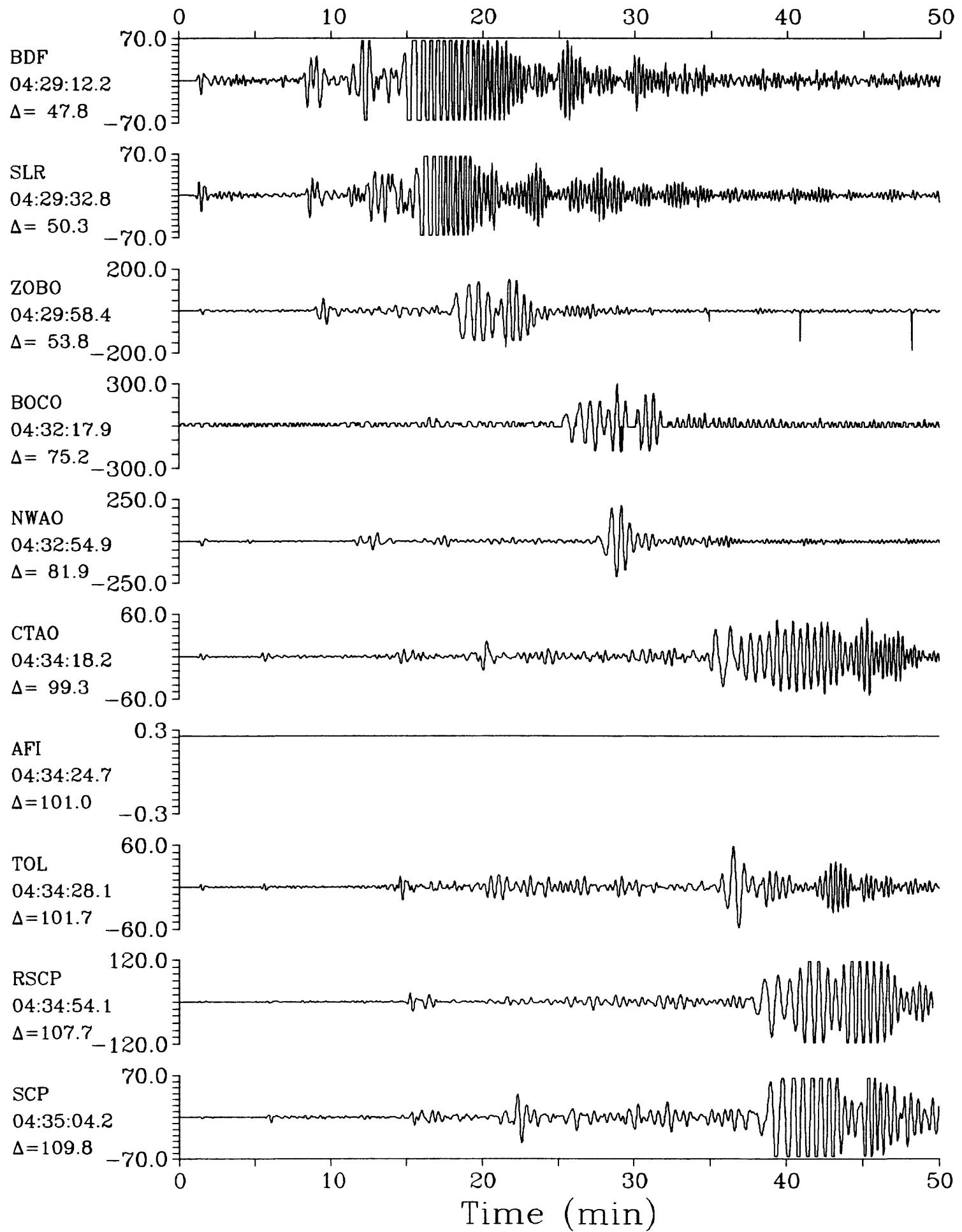


254 LPZ

22 October 1983 04:21:35.01

LPZ

South Sandwich Islands Region h=24.0 MB=6.5 ms=6.8

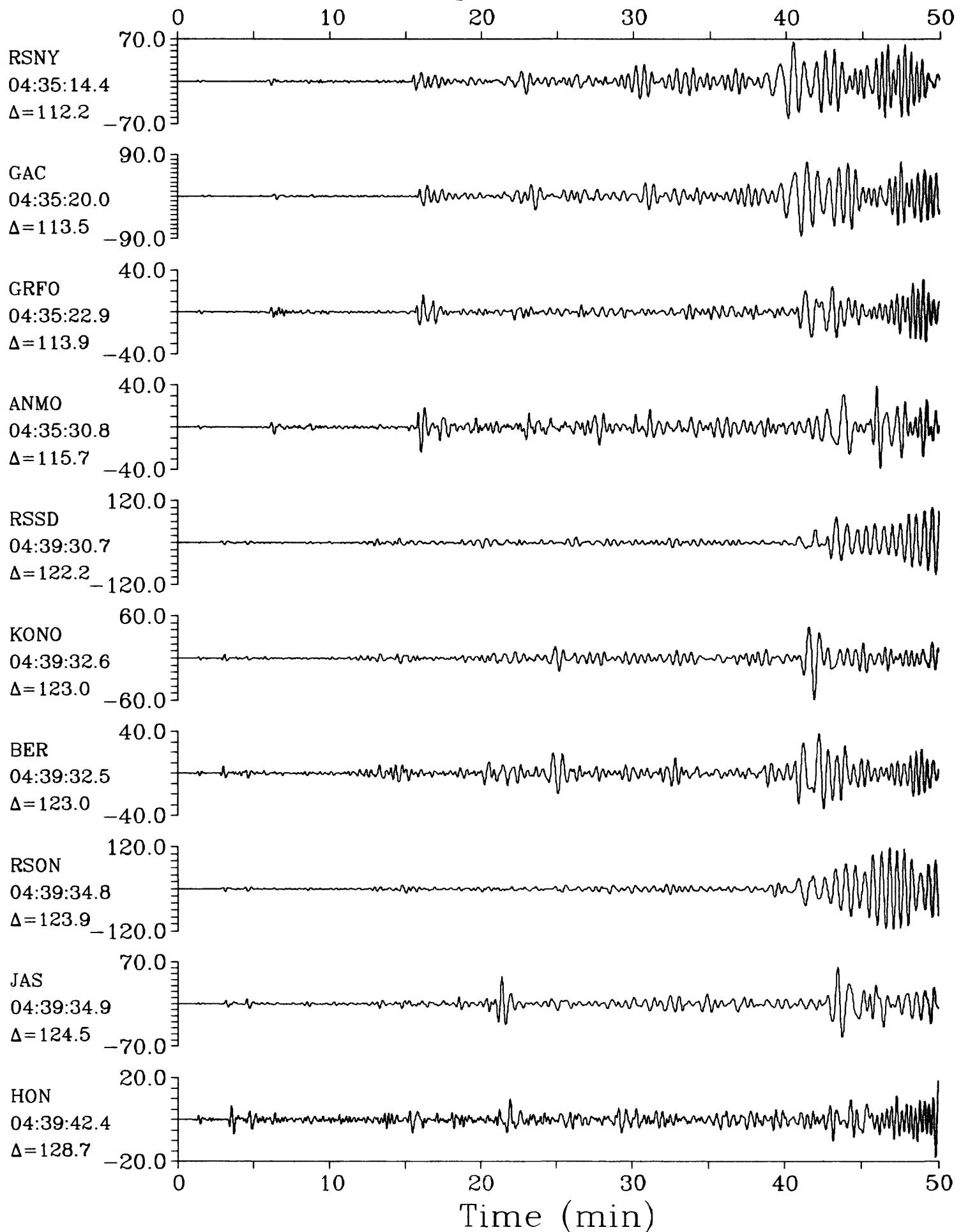


LPZ

22 October 1983 04:21:35.01

LPZ²⁵⁵

South Sandwich Islands Region h=24.0 MB=6.5 ms=6.8

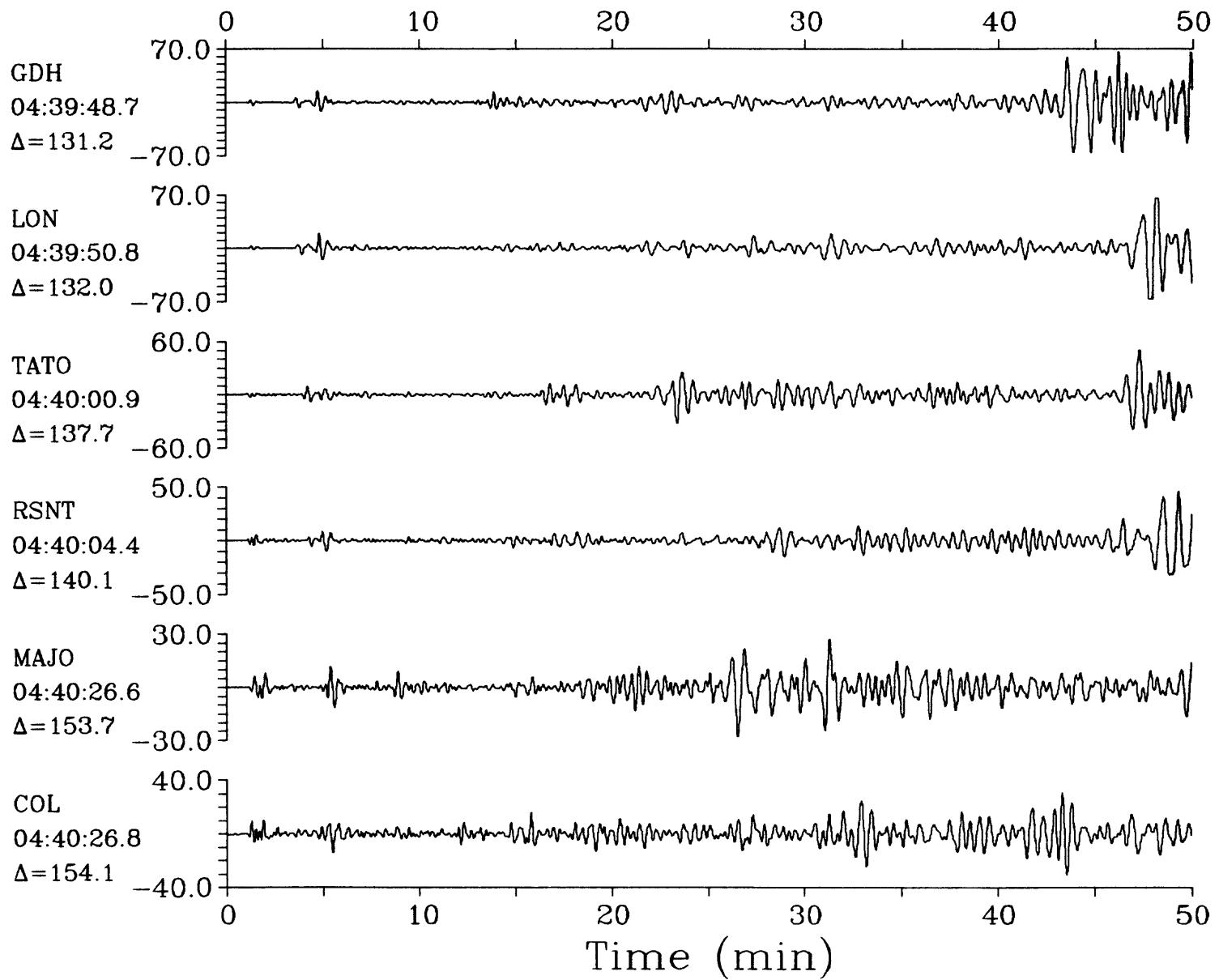


256 LPZ

22 October 1983 04:21:35.01

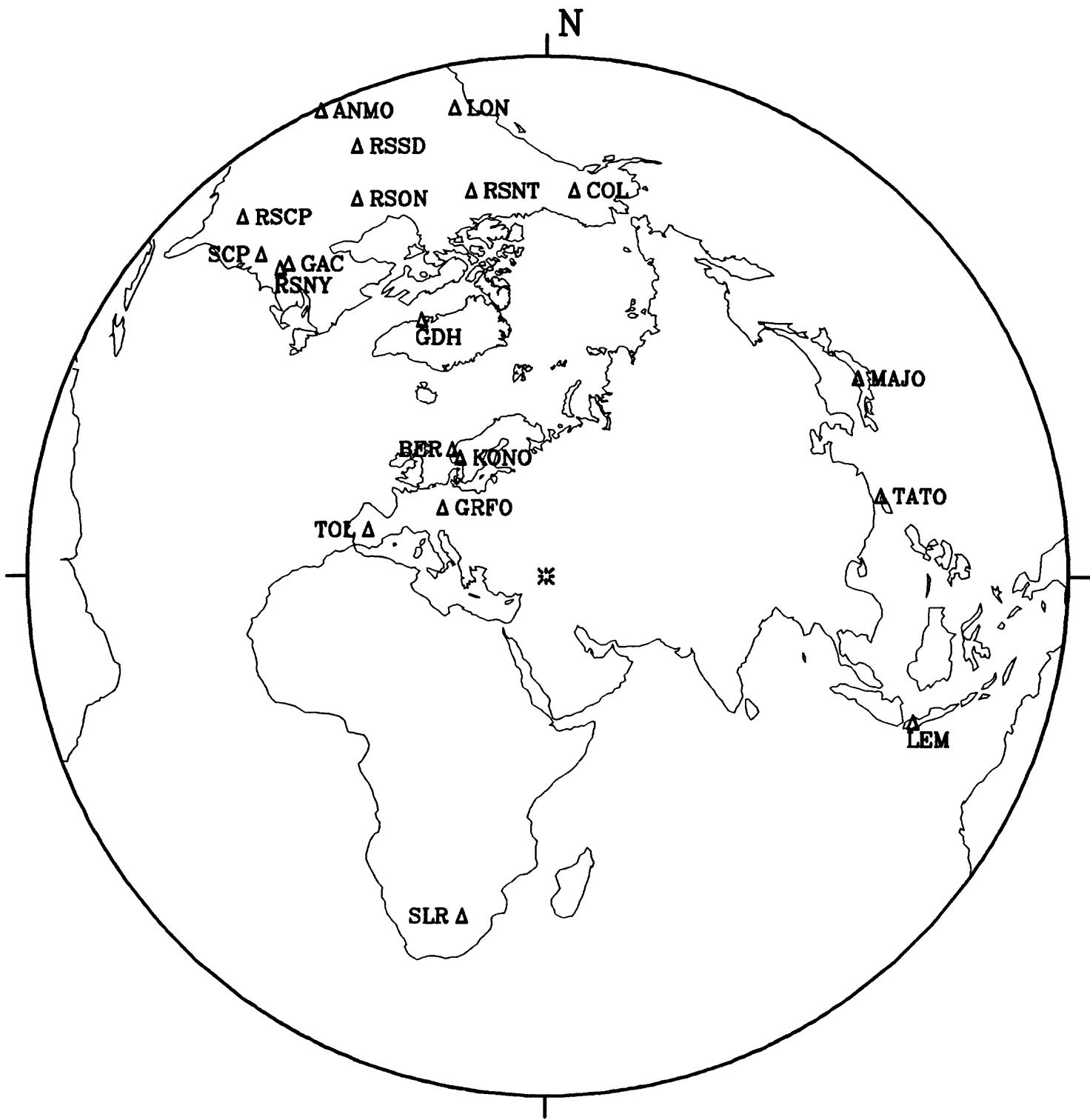
LPZ

South Sandwich Islands Region h=24.0 MB=6.5 ms=6.8



30 October 1983 04:12:27.13

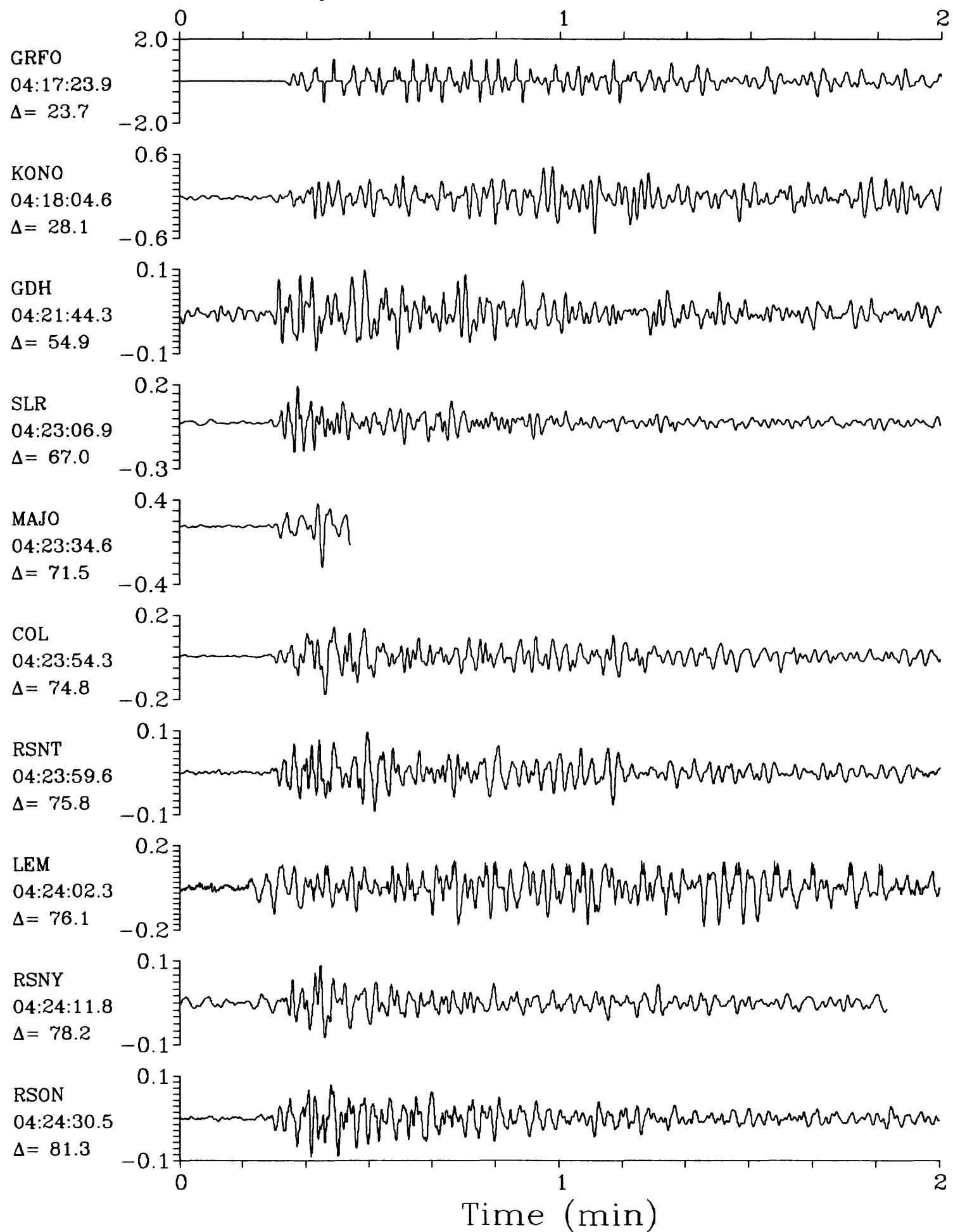
Turkey



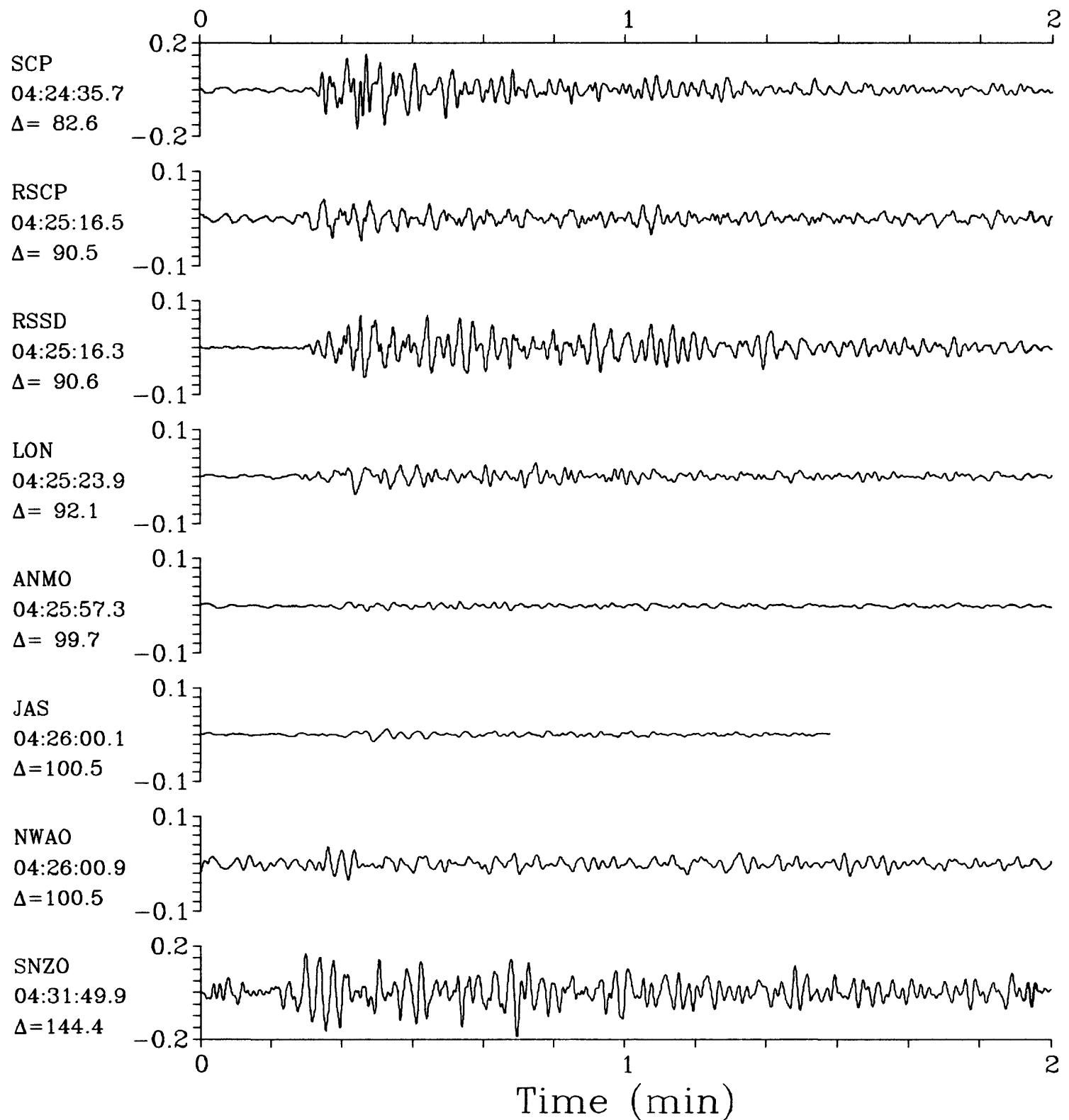
²⁵⁸ SPZ

30 October 1983 04:12:27.13
Turkey h=11.6 MB=6.1 ms=6.9

SPZ



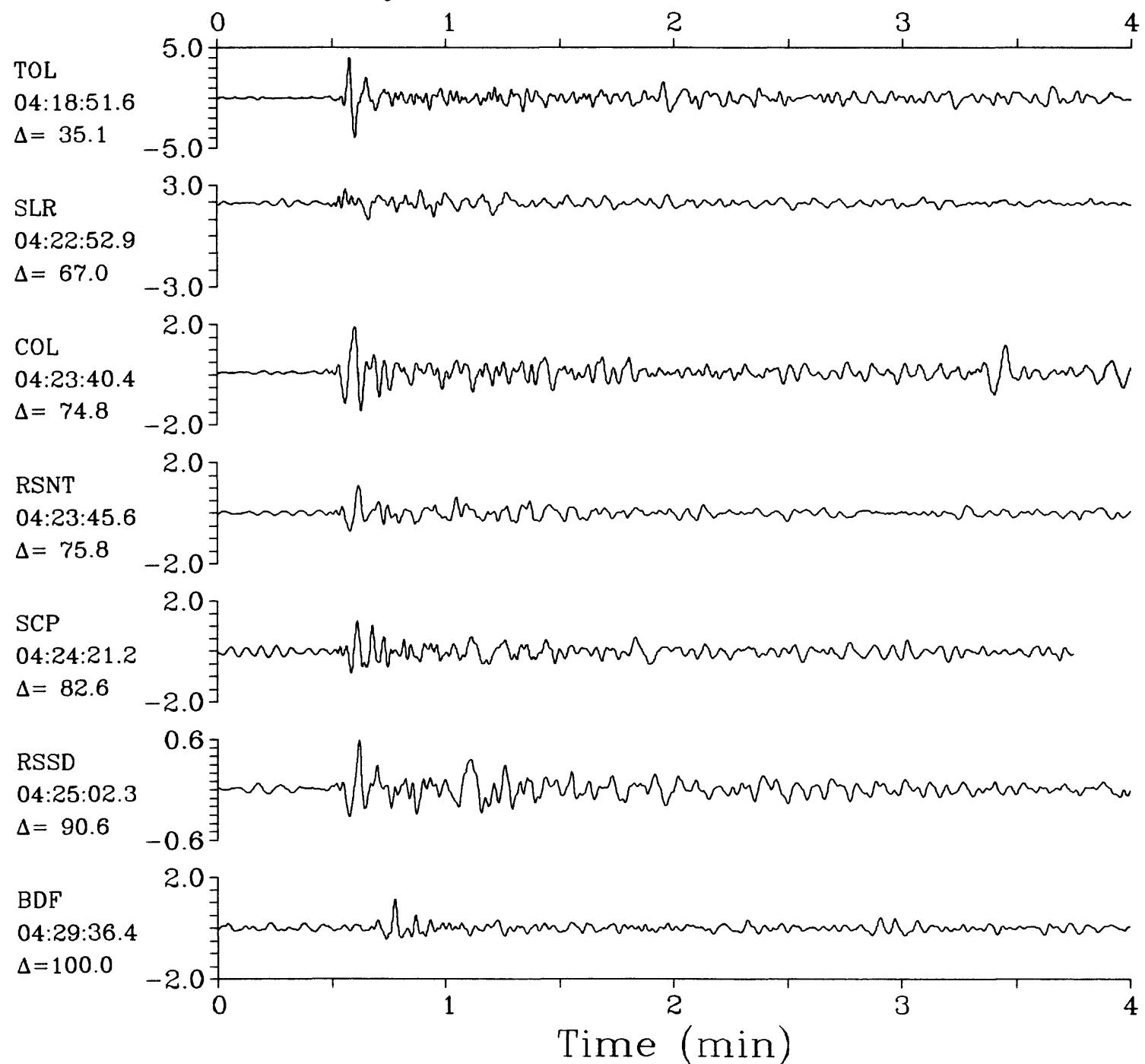
SPZ

30 October 1983 04:12:27.13
Turkey h=11.6 MB=6.1 ms=6.9SPZ²⁵⁹

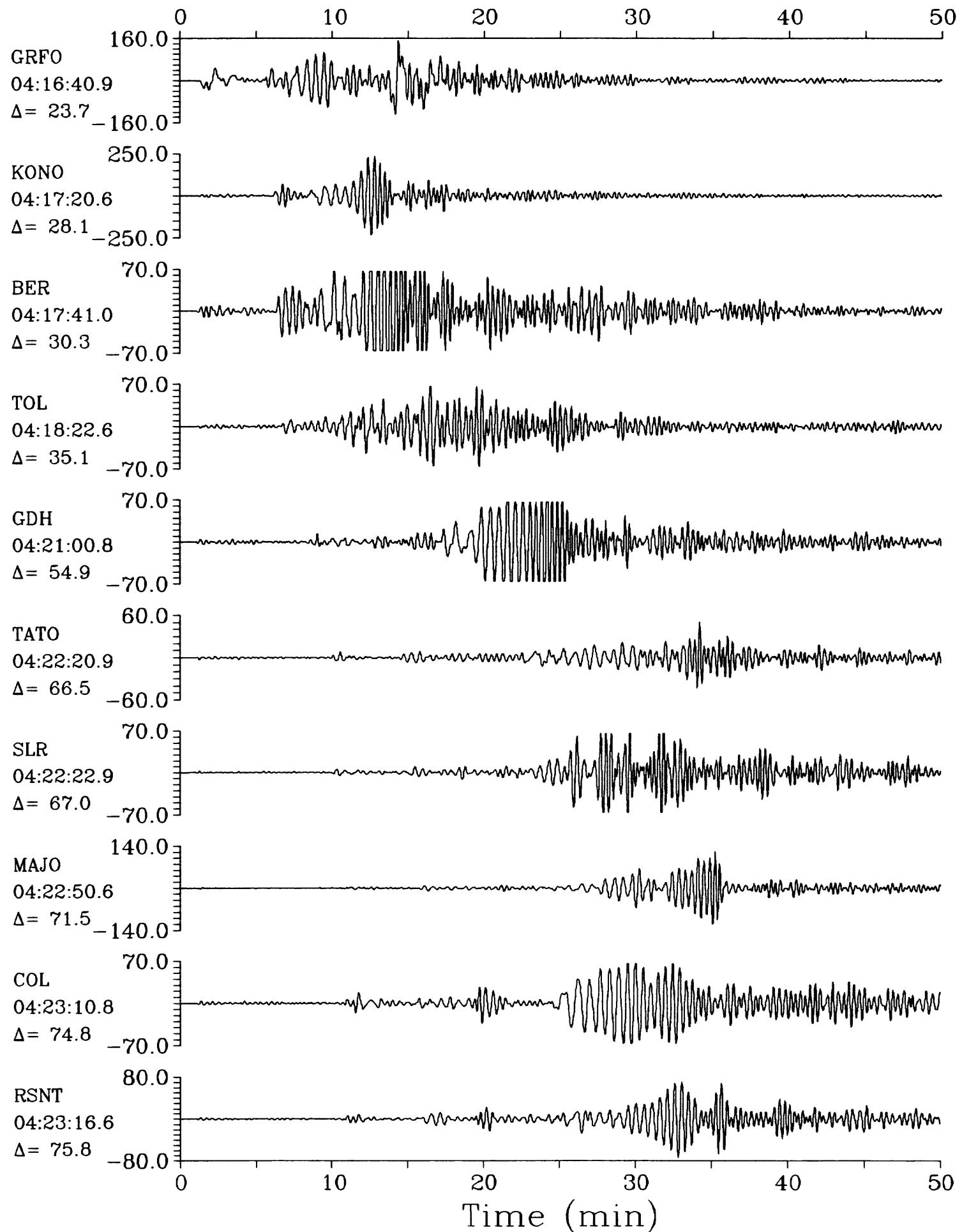
260 IPZ

30 October 1983 04:12:27.13
Turkey h=11.6 MB=6.1 ms=6.9

IPZ



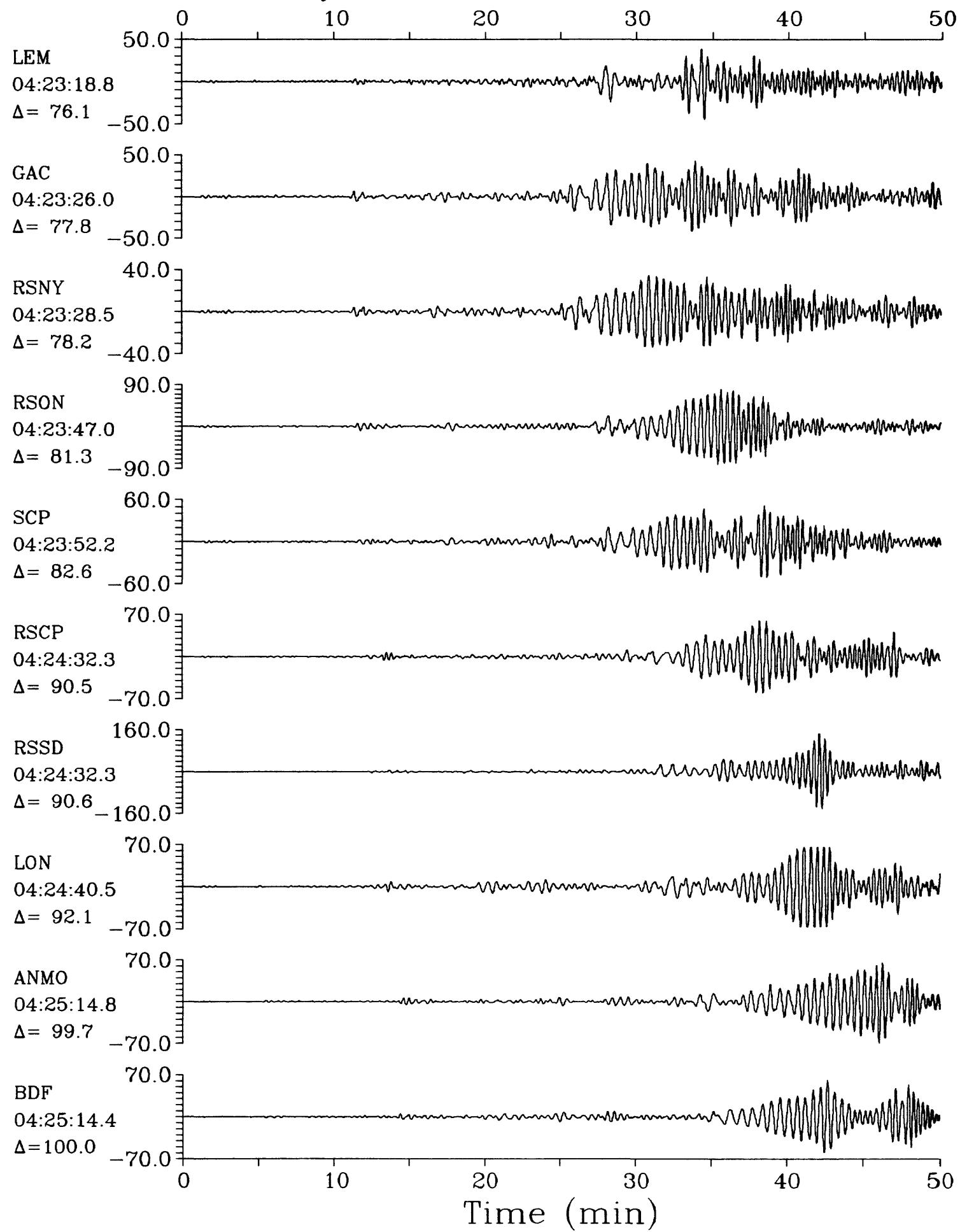
LPZ

30 October 1983 04:12:27.13
Turkey h=11.6 MB=6.1 ms=6.9LPZ²⁶¹

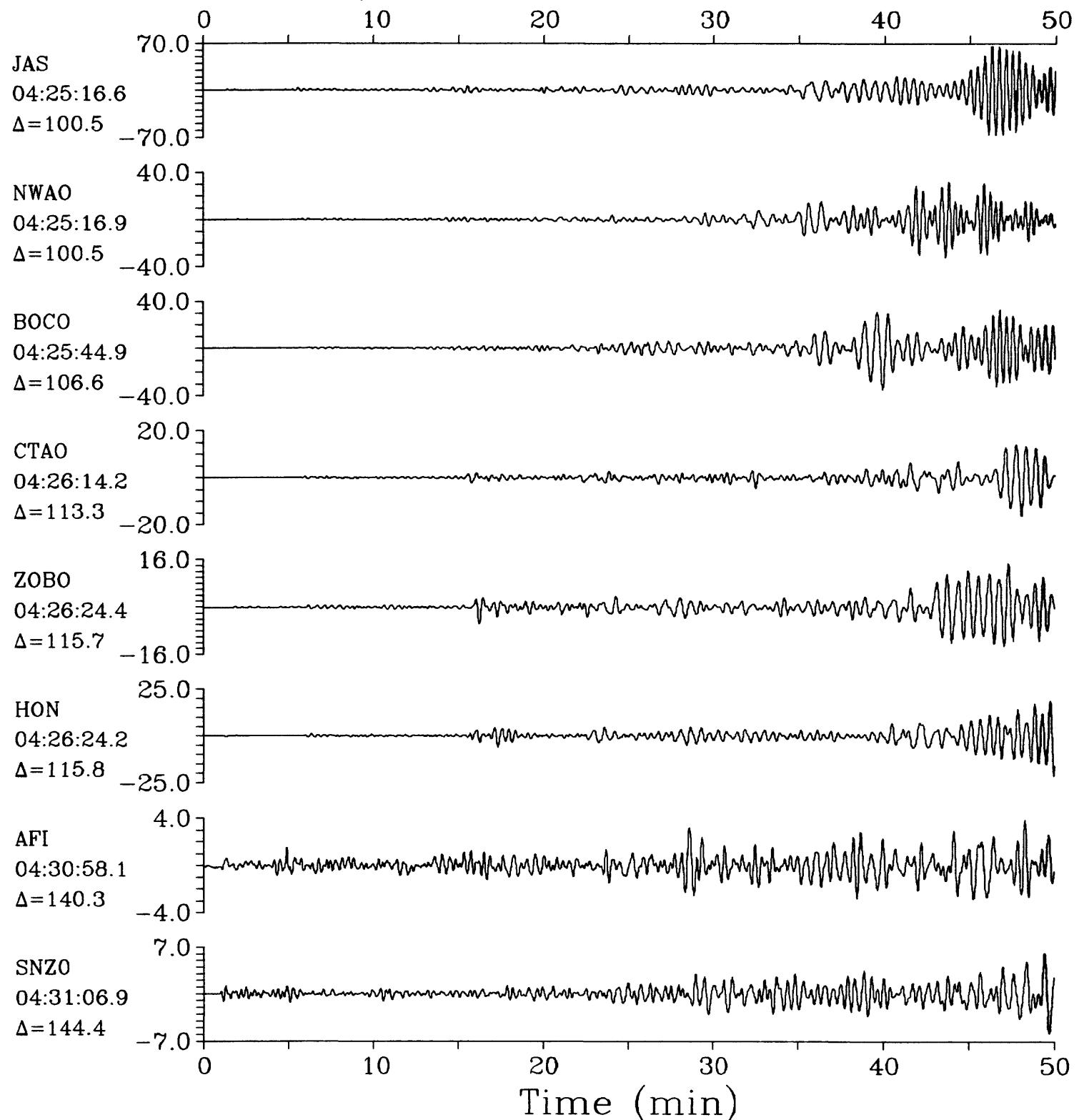
262 LPZ

30 October 1983 04:12:27.13
Turkey h=11.6 MB=6.1 ms=6.9

LPZ

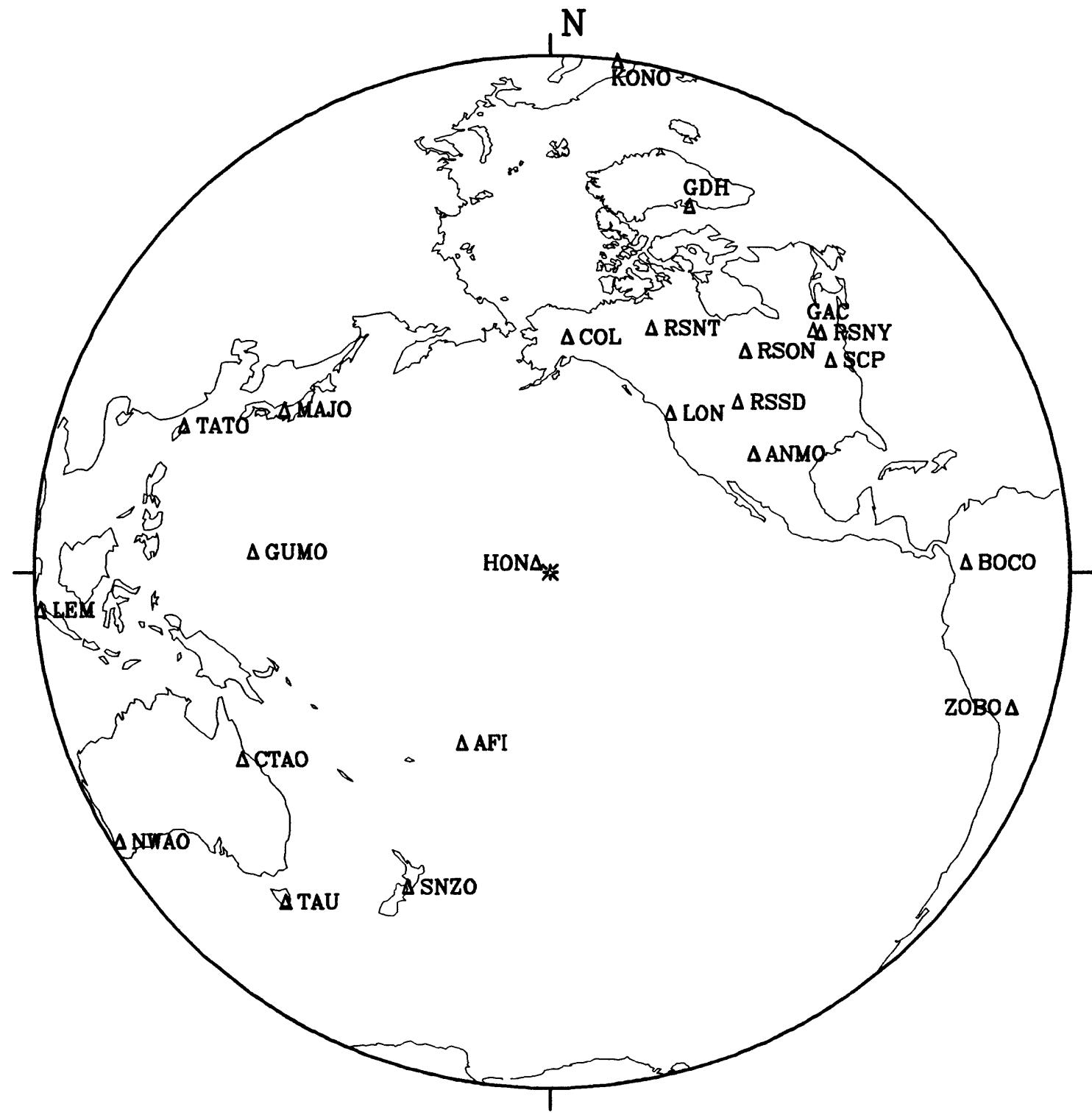


LPZ

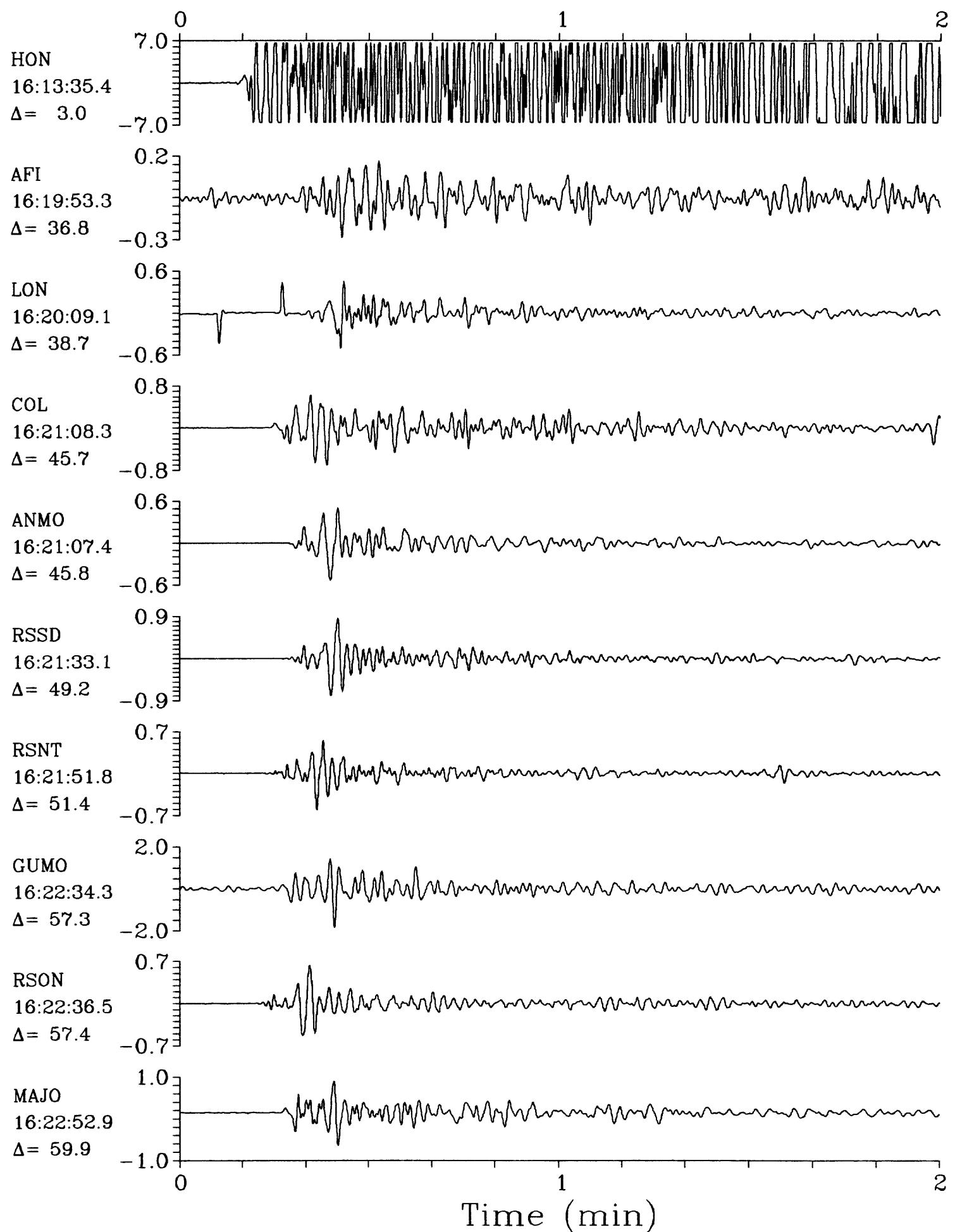
30 October 1983 04:12:27.13
Turkey h=11.6 MB=6.1 ms=6.9LPZ²⁶³

16 November 1983 16:13:00.07

Hawaii



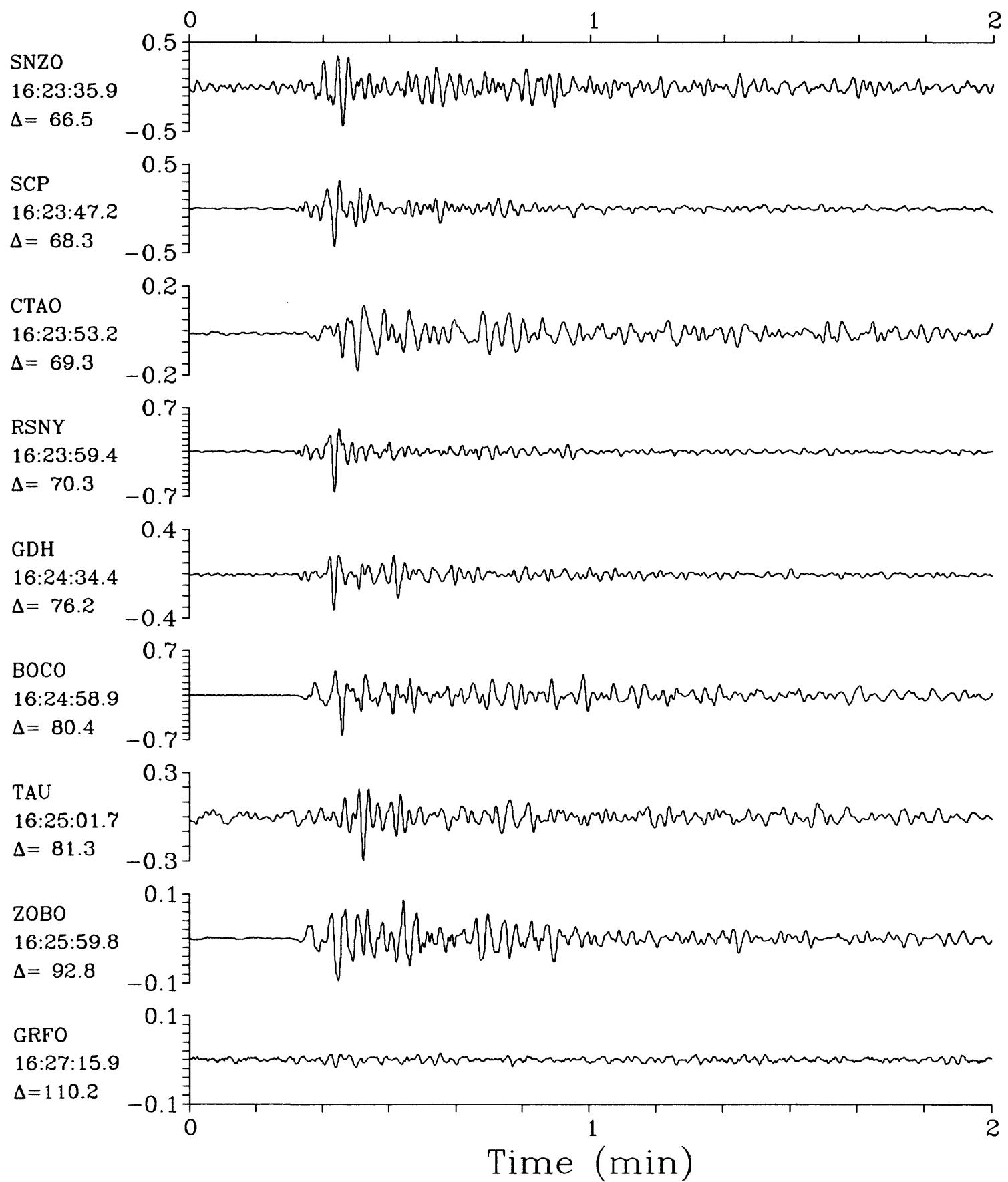
SPZ

16 November 1983 16:13:00.07
Hawaii h=12.0 MB=6.4 ms=6.7SPZ²⁶⁵

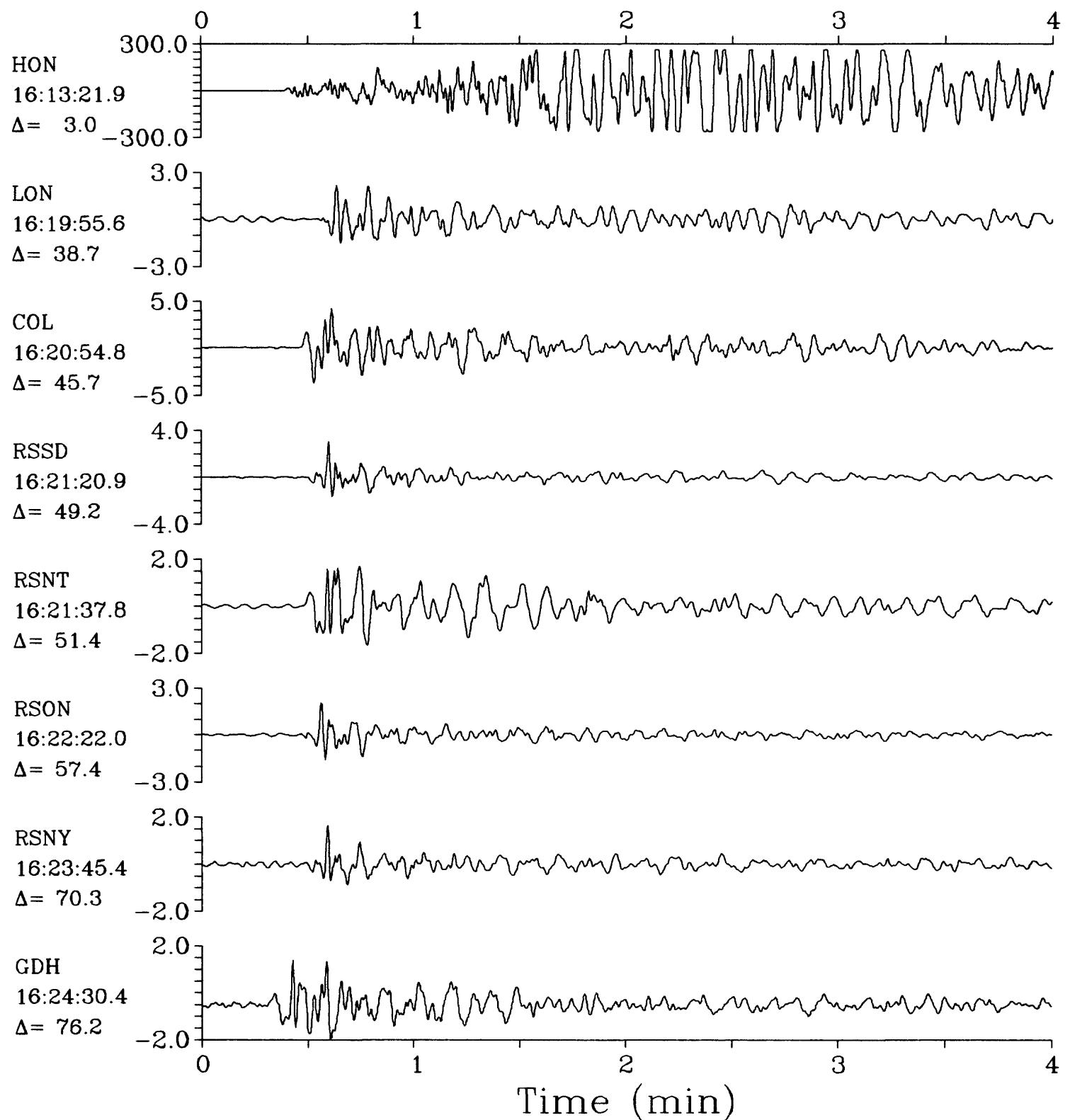
266 SPZ

16 November 1983 16:13:00.07
Hawaii h=12.0 MB=6.4 ms=6.7

SPZ



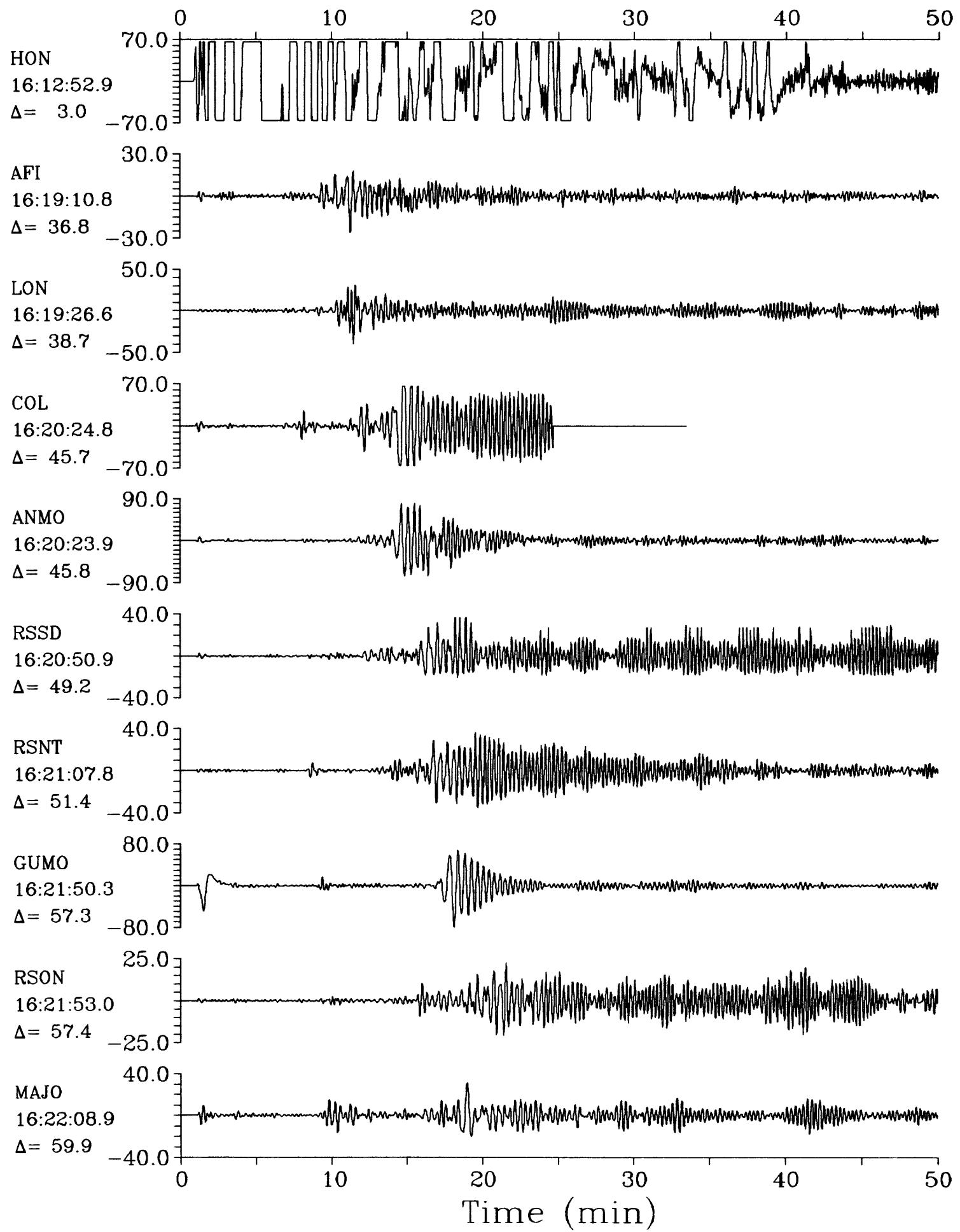
IPZ

16 November 1983 16:13:00.07
Hawaii h=12.0 MB=6.4 ms=6.7IPZ²⁶⁷

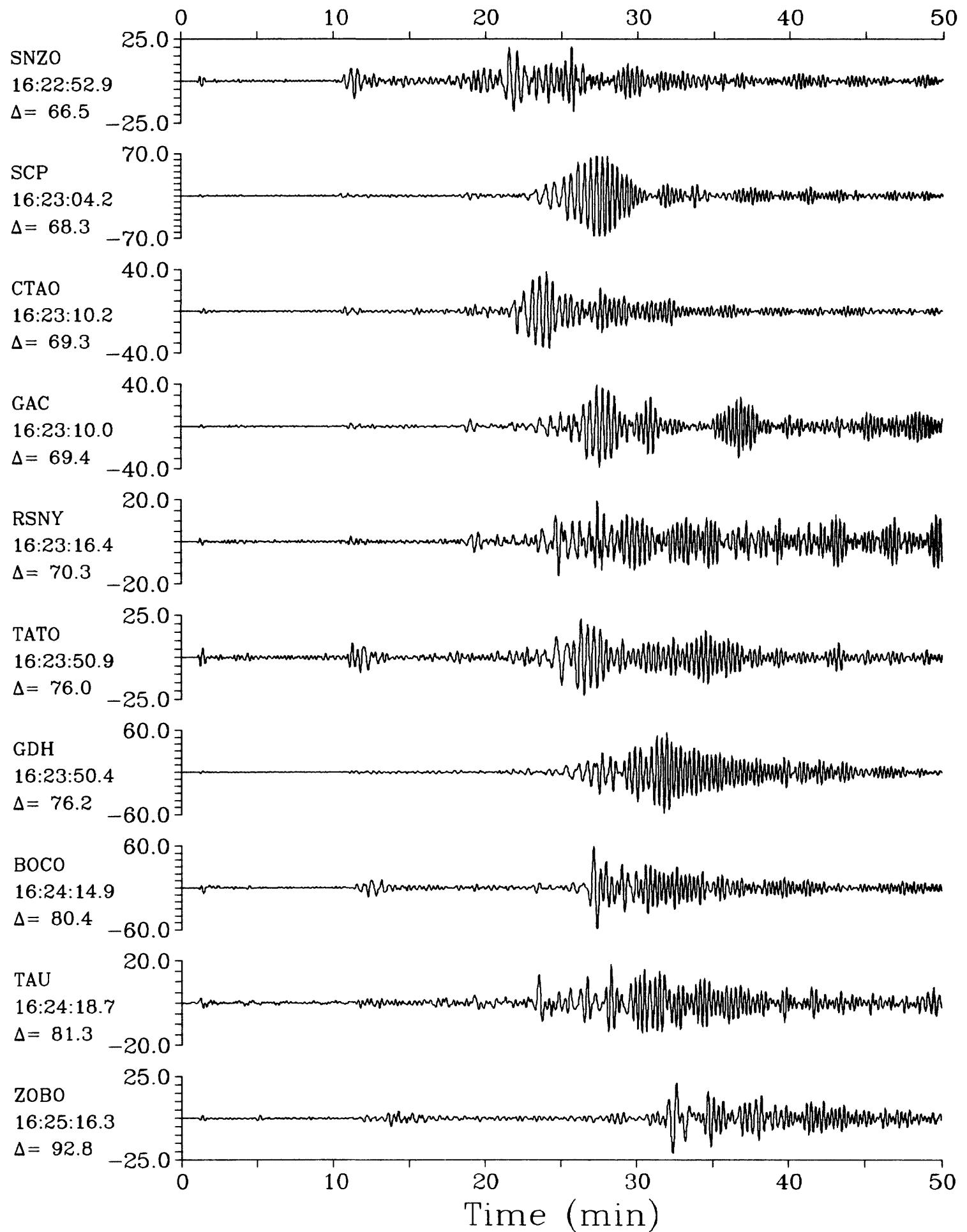
268 LPZ

16 November 1983 16:13:00.07
Hawaii h=12.0 MB=6.4 ms=6.7

LPZ



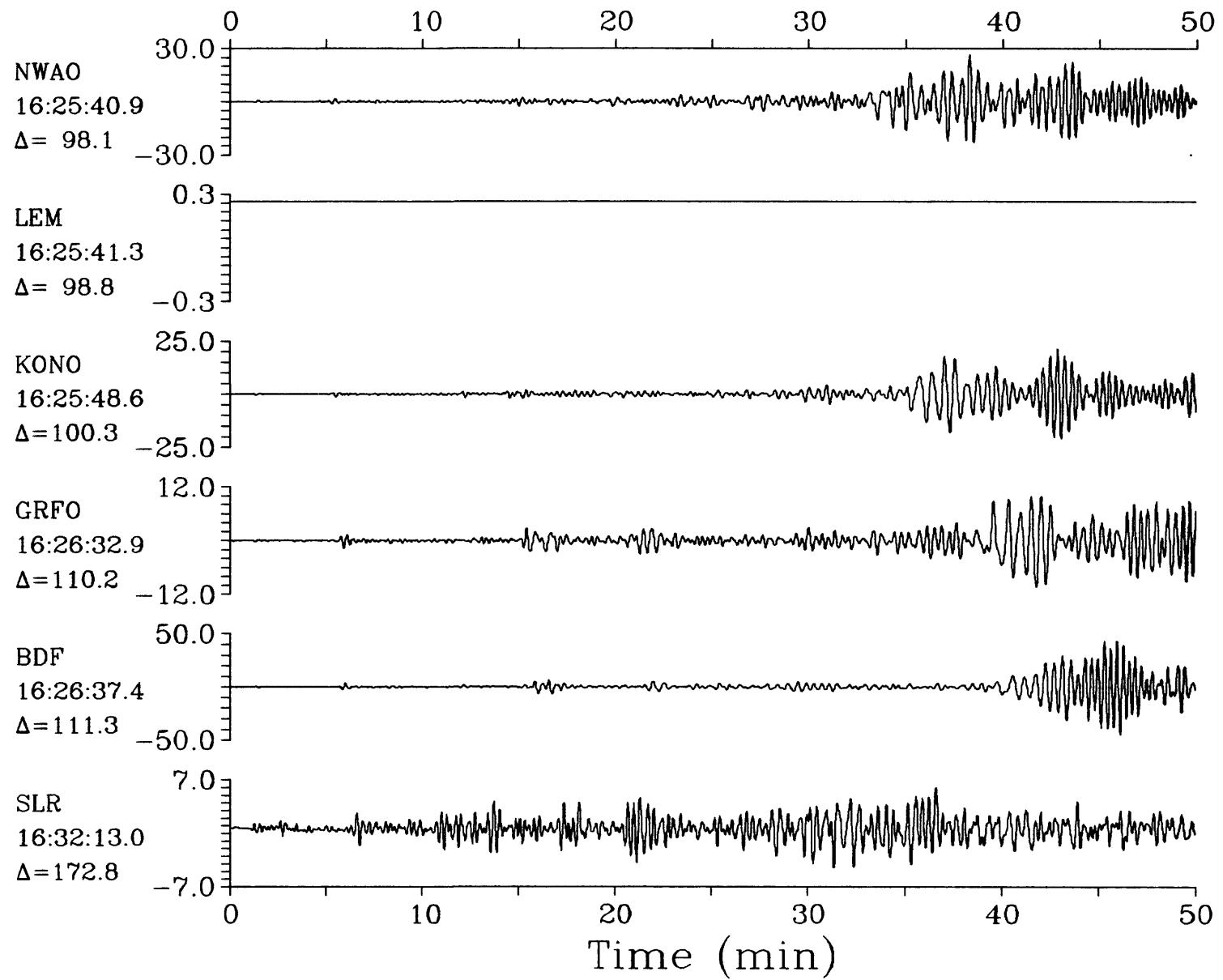
LPZ

16 November 1983 16:13:00.07
Hawaii h=12.0 MB=6.4 ms=6.7LPZ²⁶⁹

²⁷⁰LPZ

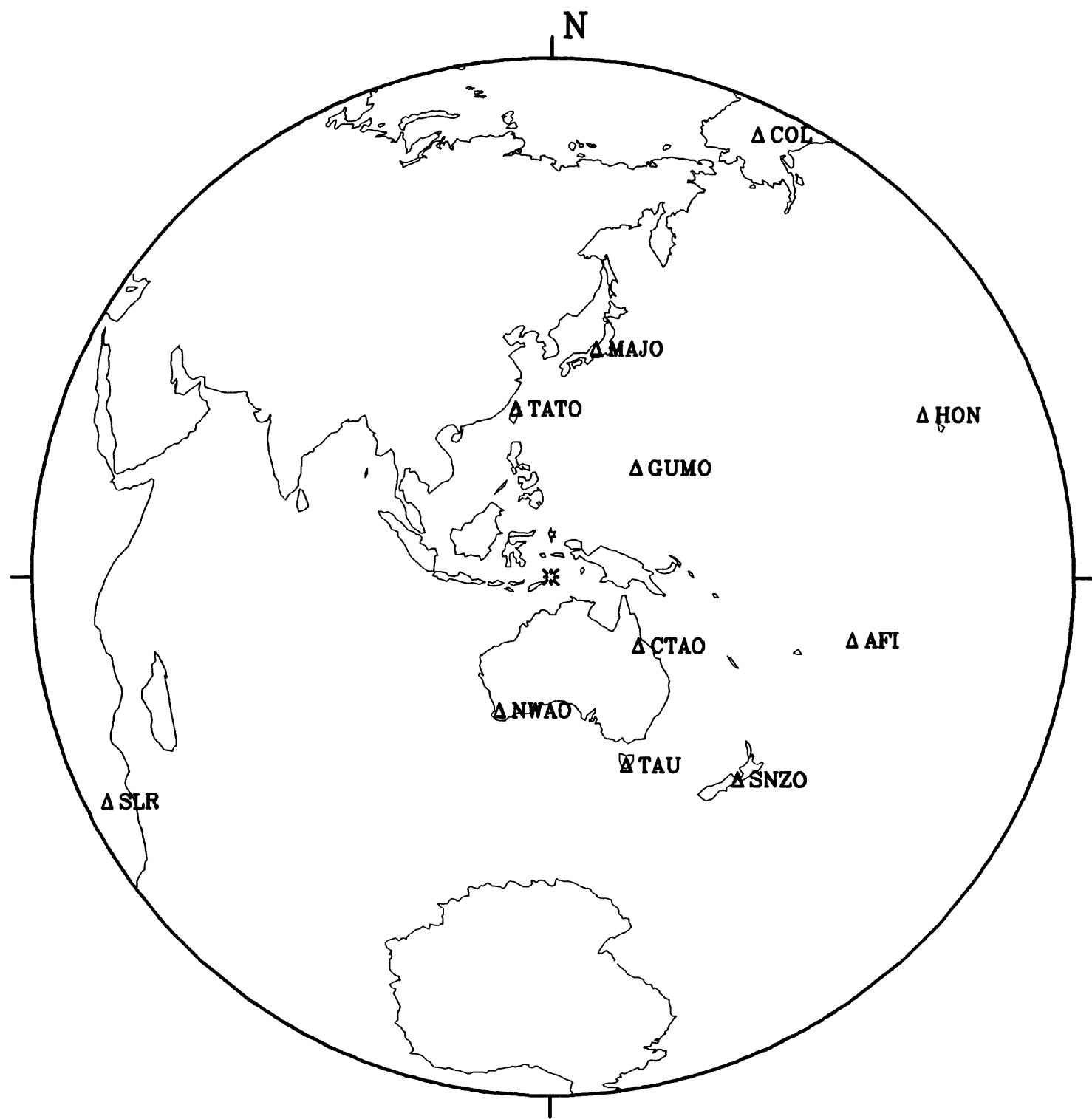
16 November 1983 16:13:00.07
Hawaii h=12.0 MB=6.4 ms=6.7

LPZ



24 November 1983 05:30:34.23

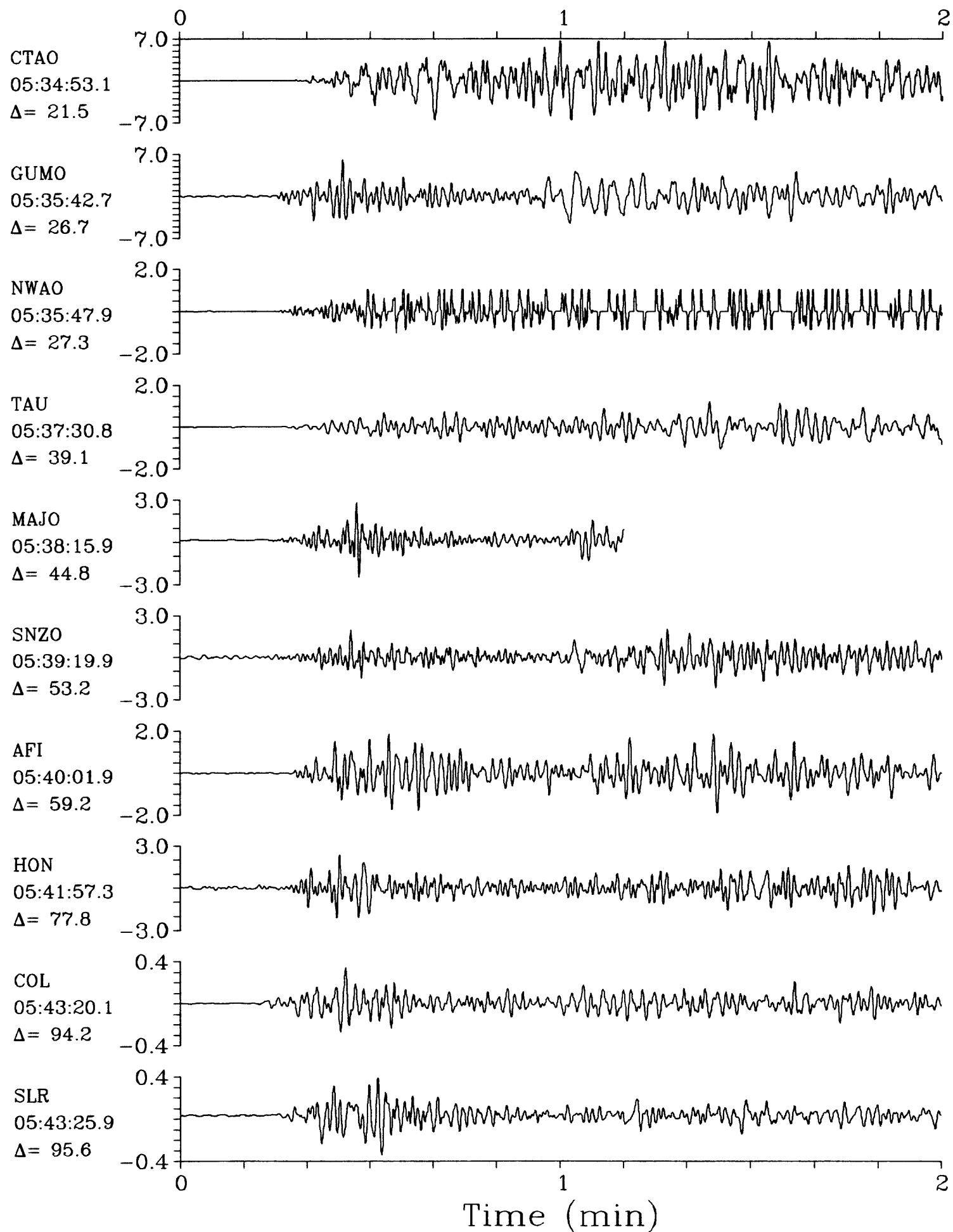
Banda Sea



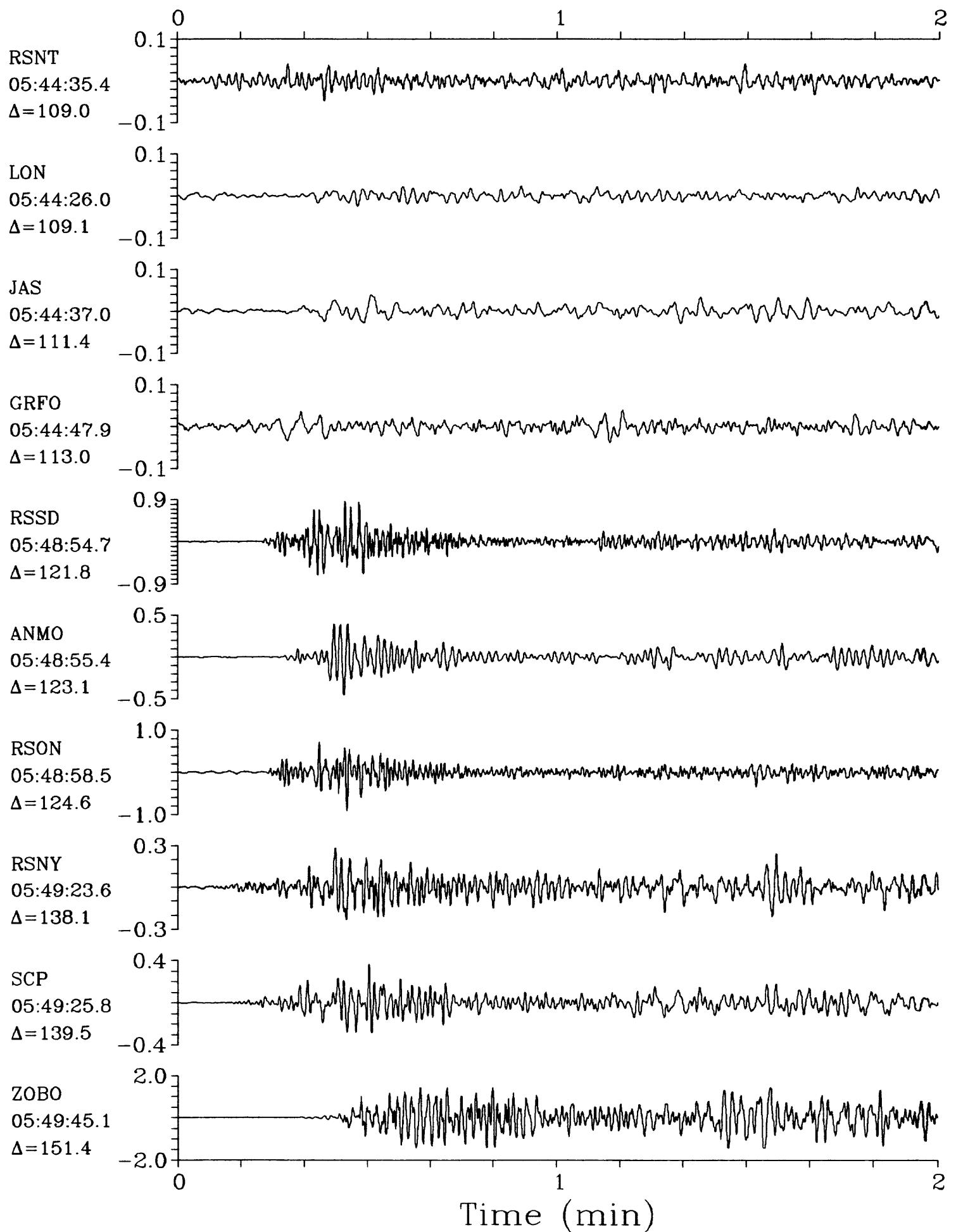
272 SPZ

24 November 1983 05:30:34.23
Banda Sea h=178.5 MB=6.4

SPZ



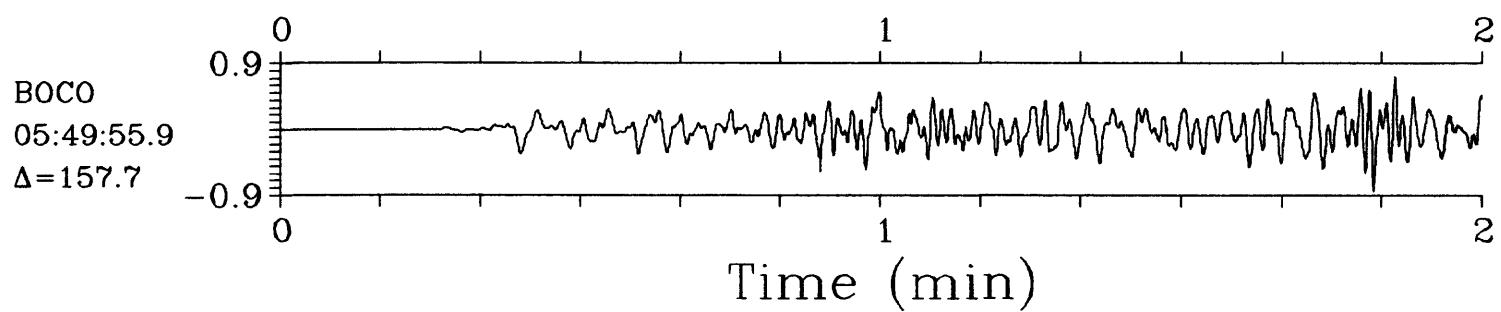
SPZ

24 November 1983 05:30:34.23
Banda Sea h=178.5 MB=6.4SPZ²⁷³

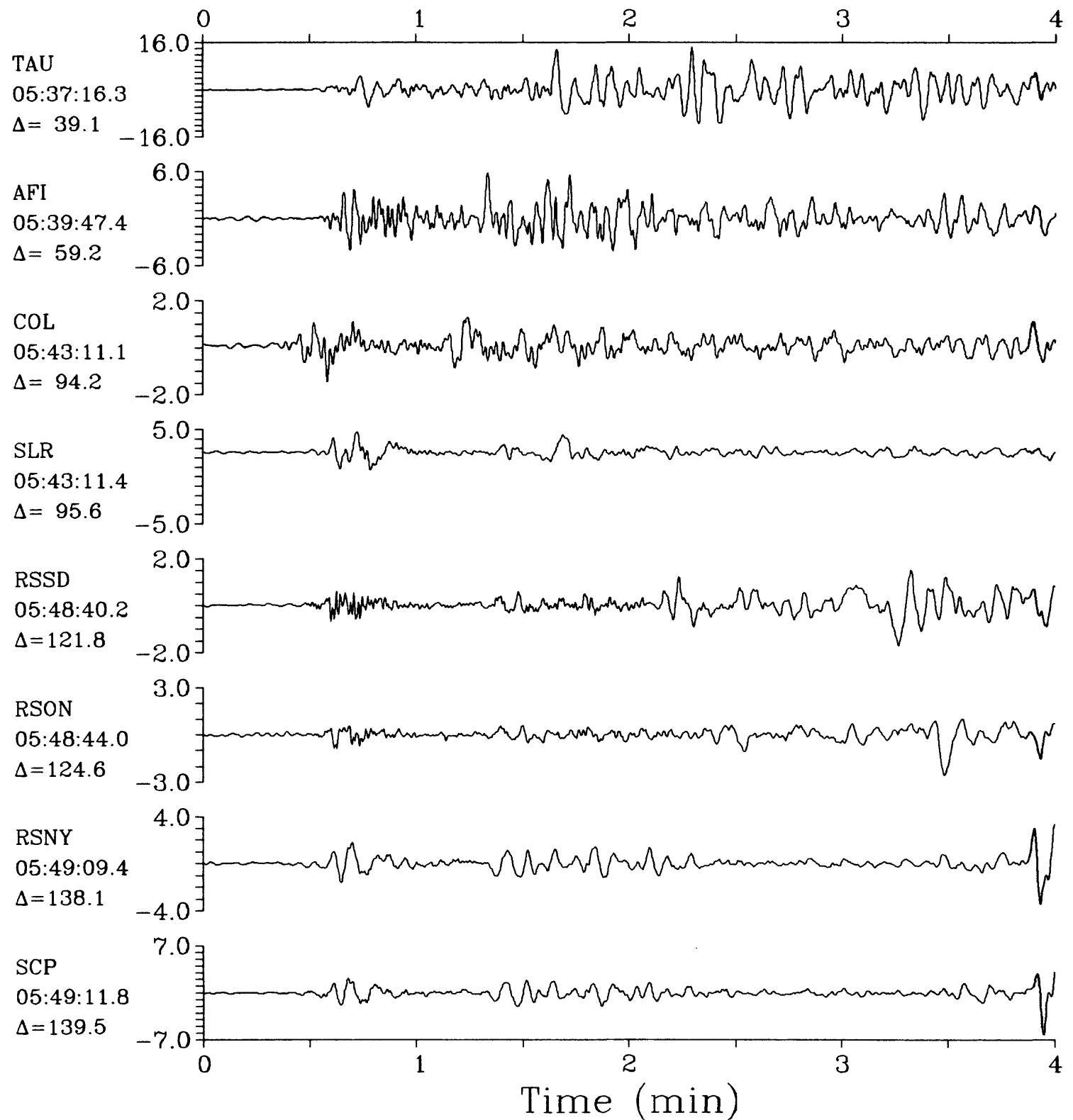
²⁷⁴ SPZ

24 November 1983 05:30:34.23
Banda Sea h=178.5 MB=6.4

SPZ



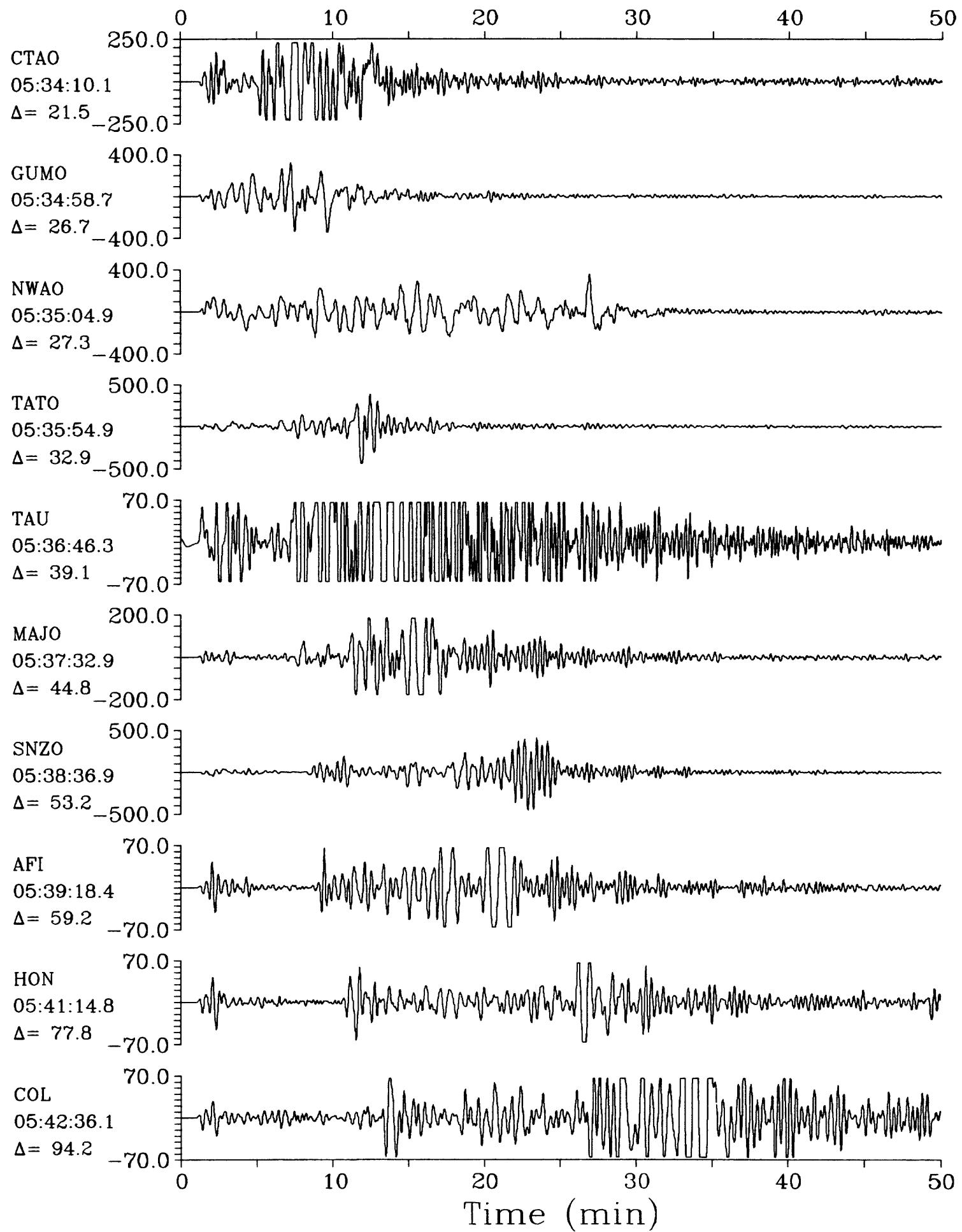
IPZ

24 November 1983 05:30:34.23
Banda Sea h=178.5 MB=6.4IPZ²⁷⁵

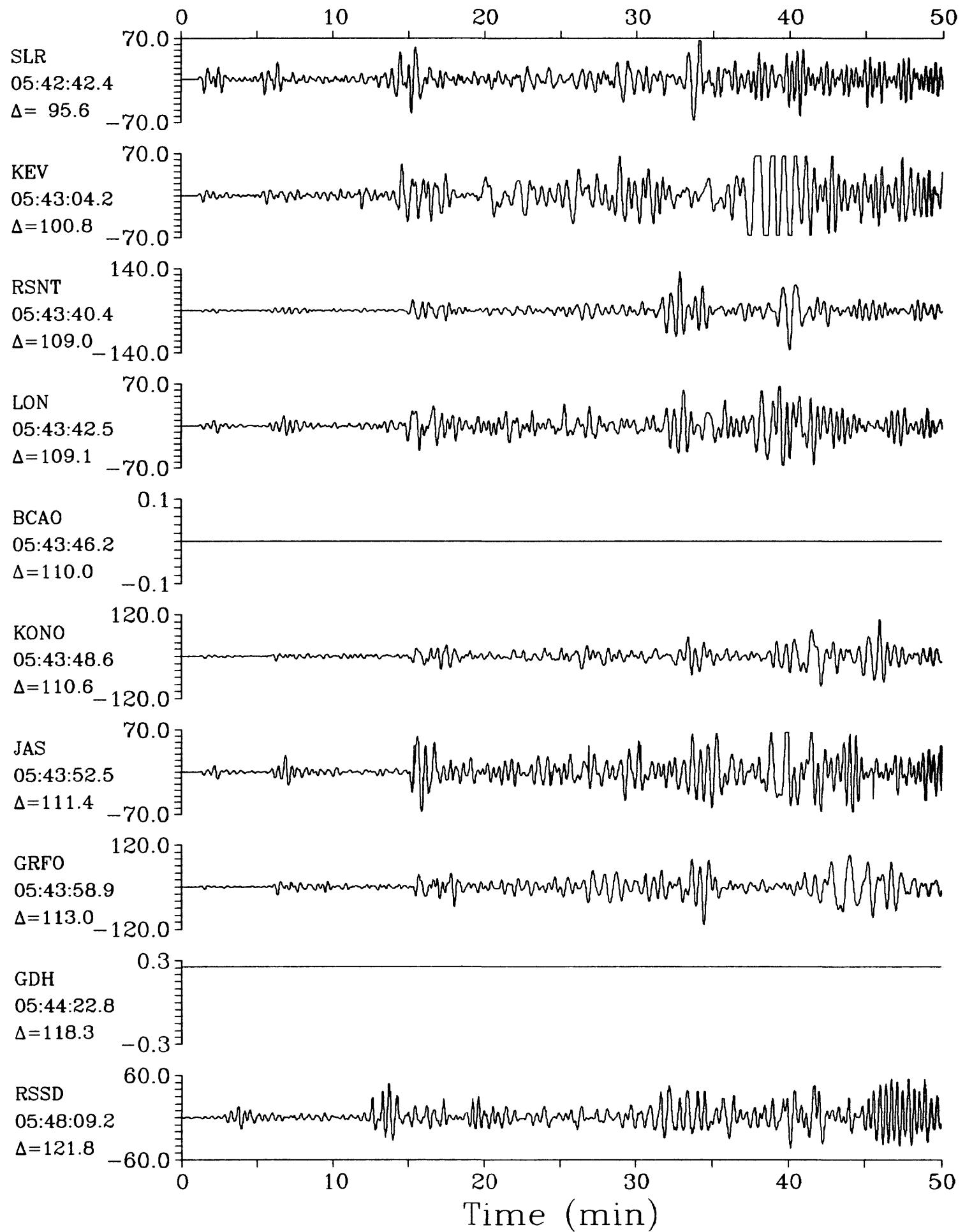
²⁷⁶LPZ

24 November 1983 05:30:34.23
Banda Sea h=178.5 MB=6.4

LPZ



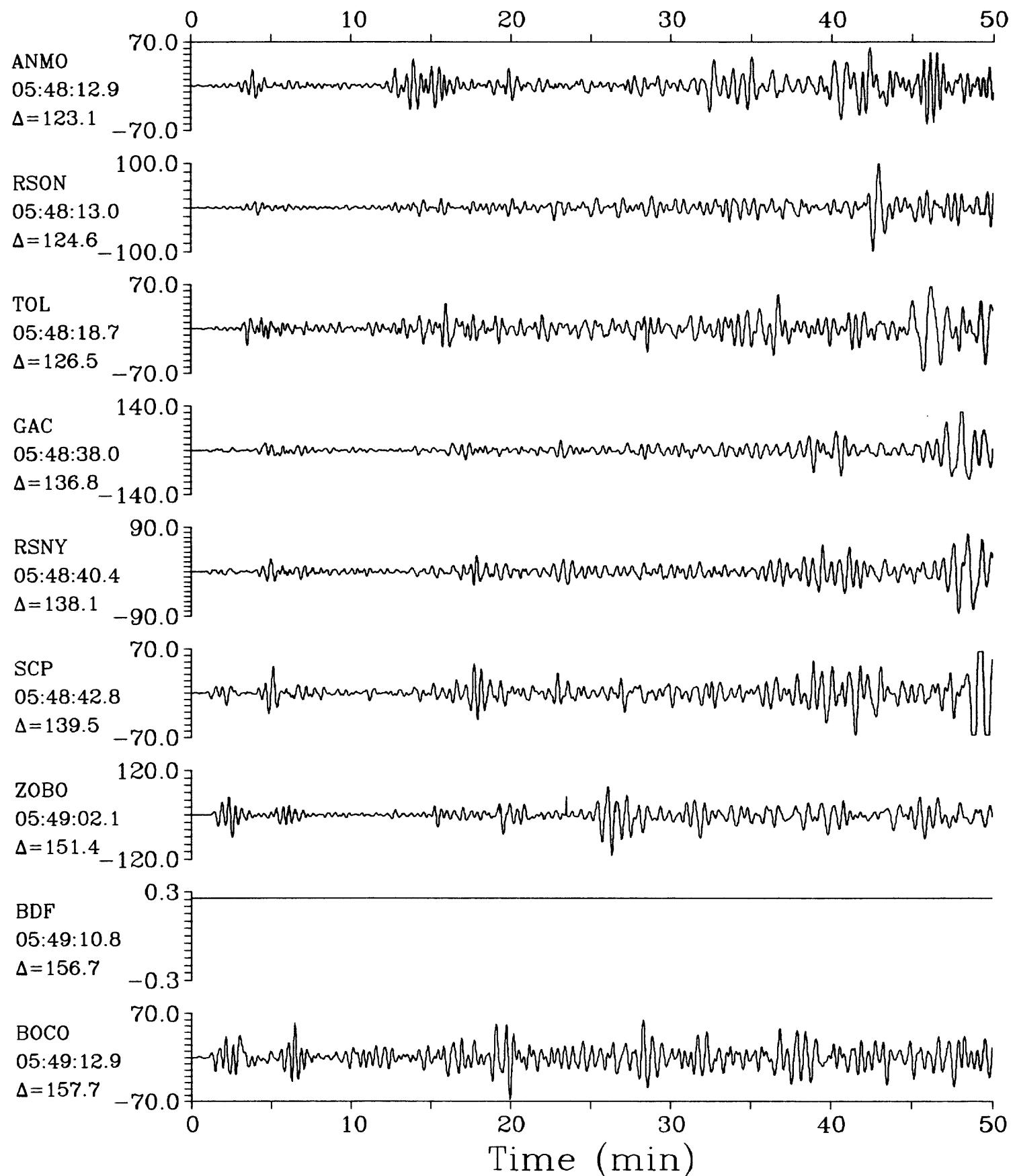
LPZ

24 November 1983 05:30:34.23
Banda Sea h=178.5 MB=6.4LPZ²⁷⁷

278 LPZ

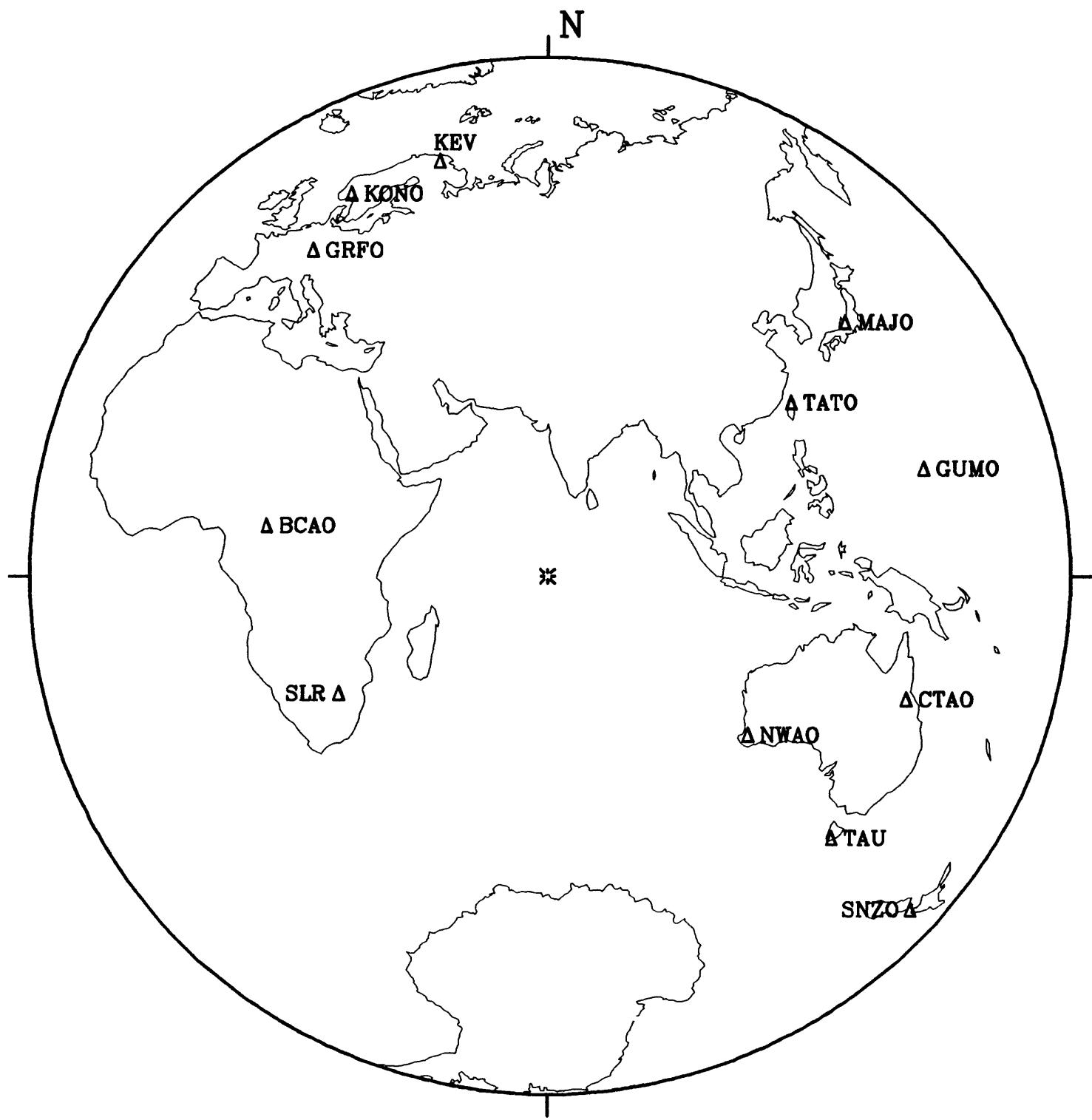
24 November 1983 05:30:34.23
Banda Sea h=178.5 MB=6.4

LPZ



30 November 1983 17:46:00.67

Chagos Archipelago Region

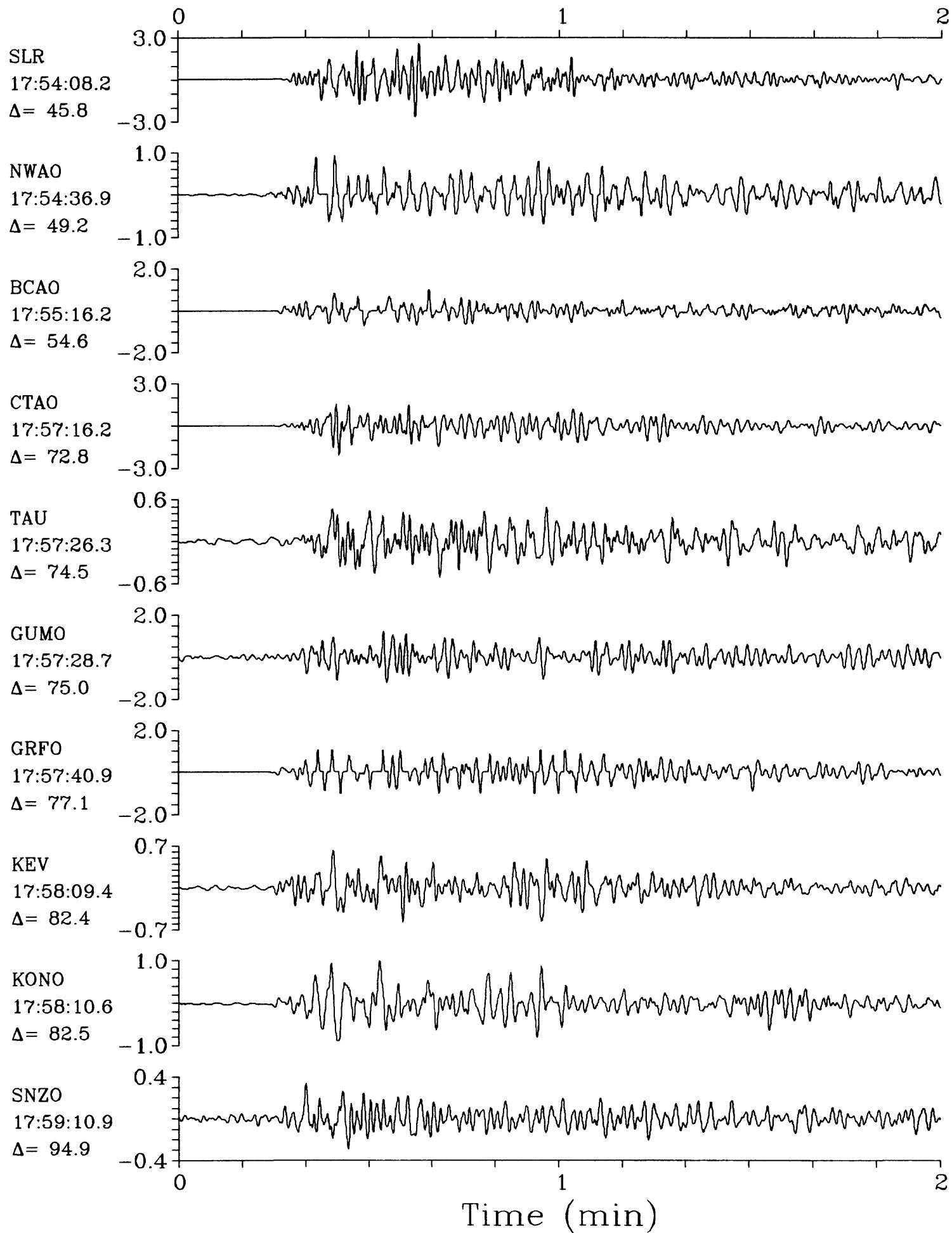


280 SPZ

30 November 1983 17:46:00.67

SPZ

Chagos Archipelago Region h=10.0 MB=6.6 ms=7.6

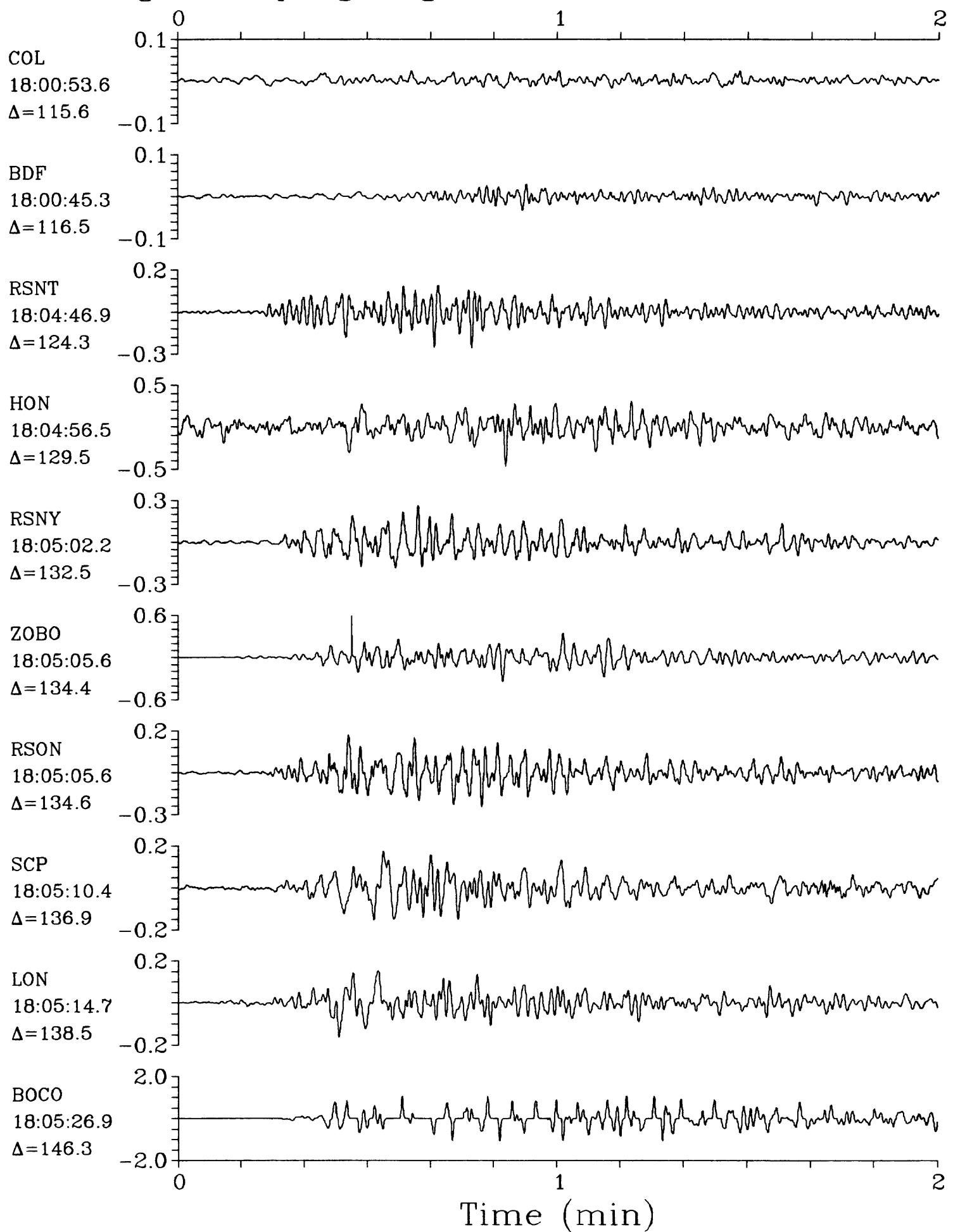


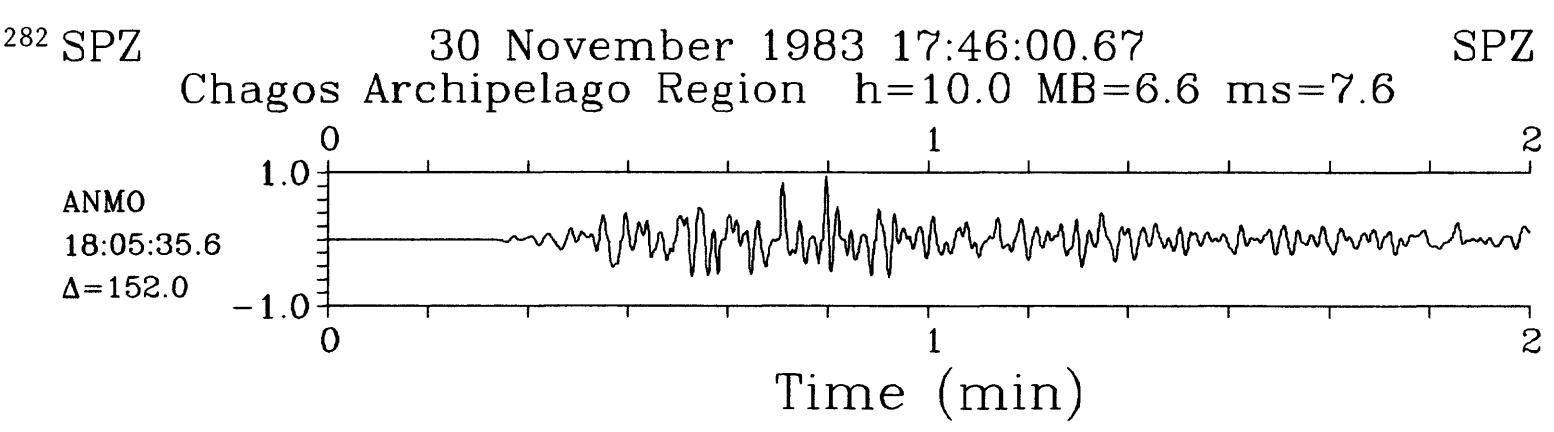
SPZ

30 November 1983 17:46:00.67

SPZ²⁸¹

Chagos Archipelago Region h=10.0 MB=6.6 ms=7.6



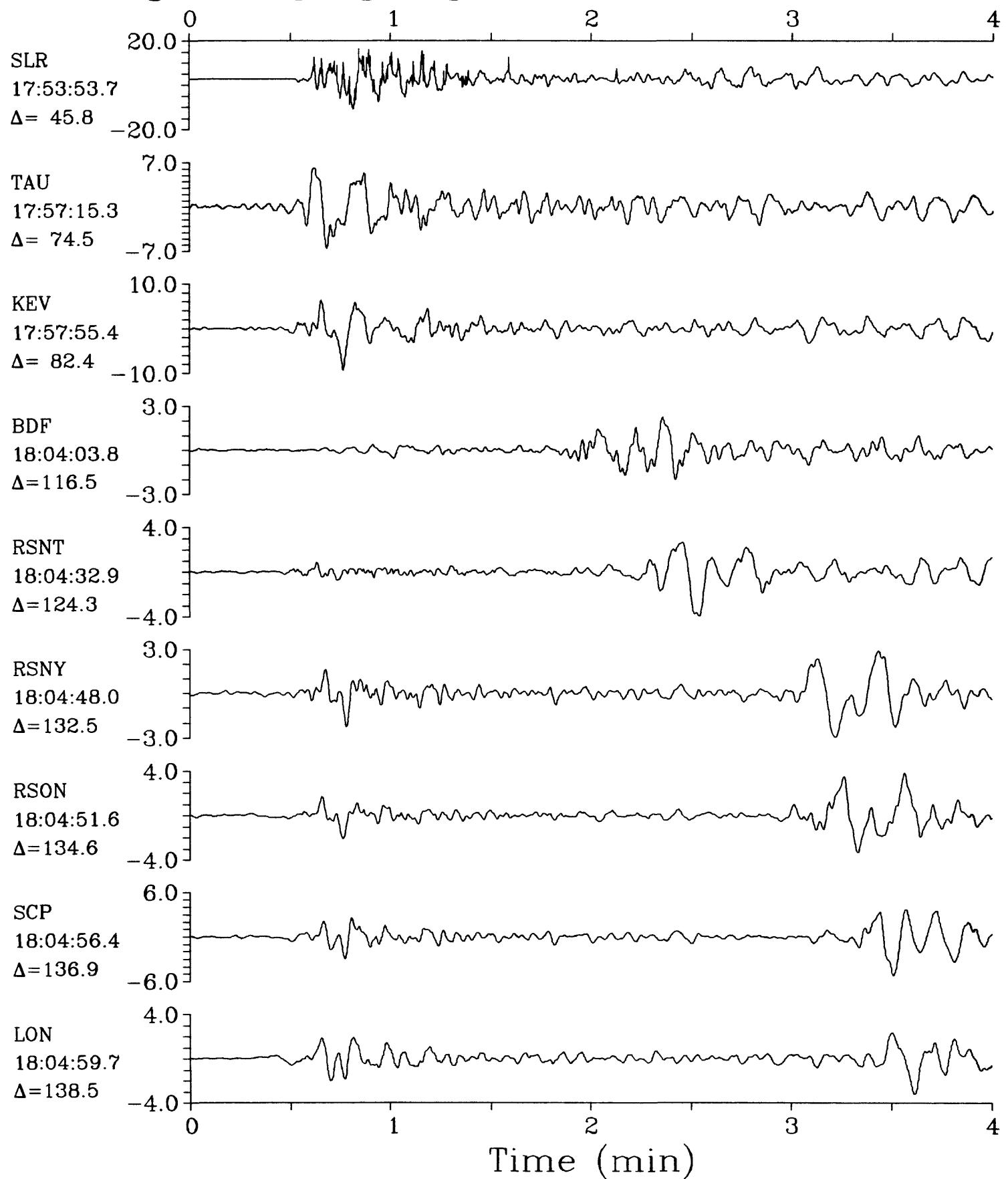


IPZ

30 November 1983 17:46:00.67

IPZ 283

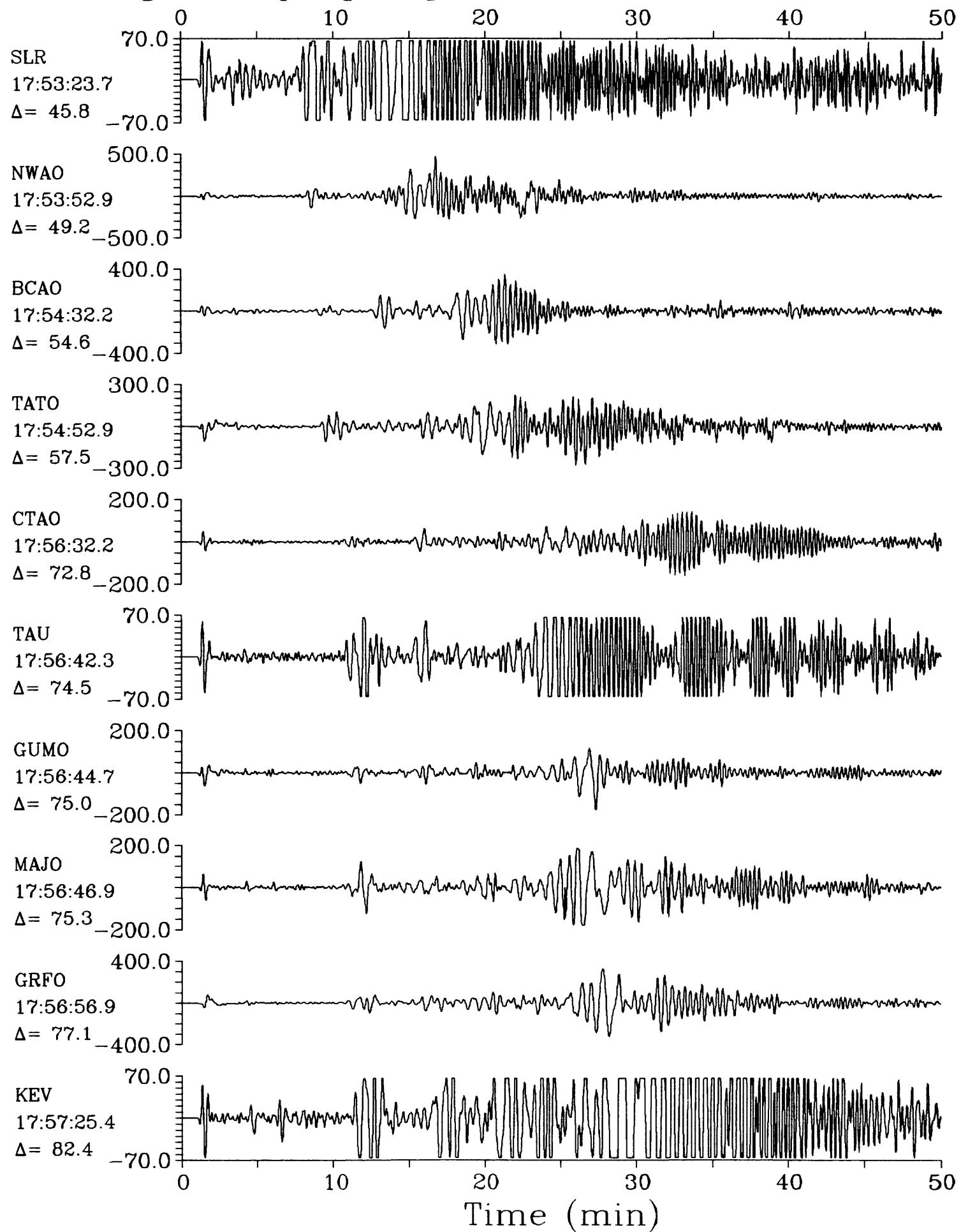
Chagos Archipelago Region h=10.0 MB=6.6 ms=7.6



284 LPZ

30 November 1983 17:46:00.67

LPZ

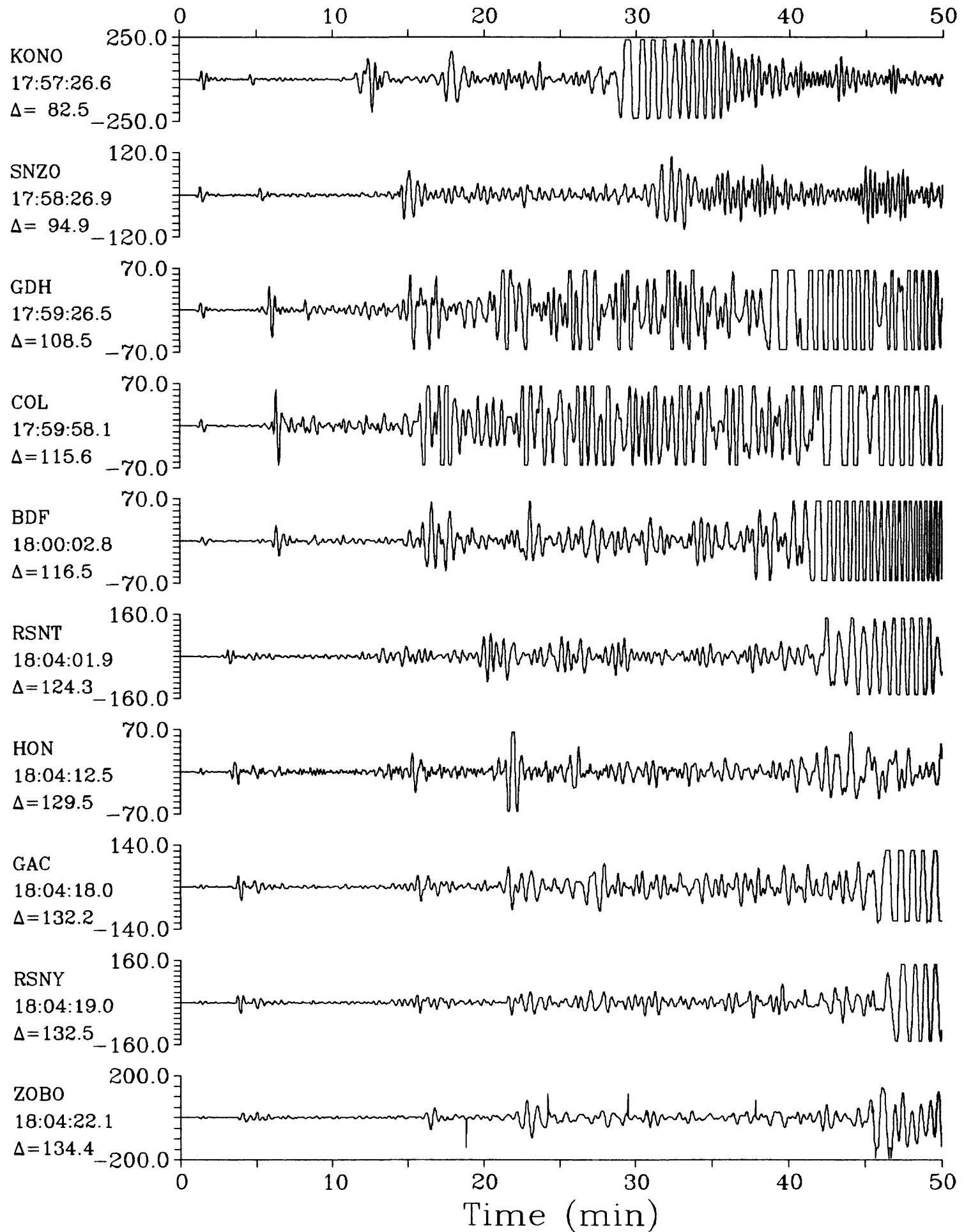
Chagos Archipelago Region $h=10.0$ MB=6.6 ms=7.6

LPZ

30 November 1983 17:46:00.67

LPZ 285

Chagos Archipelago Region h=10.0 MB=6.6 ms=7.6

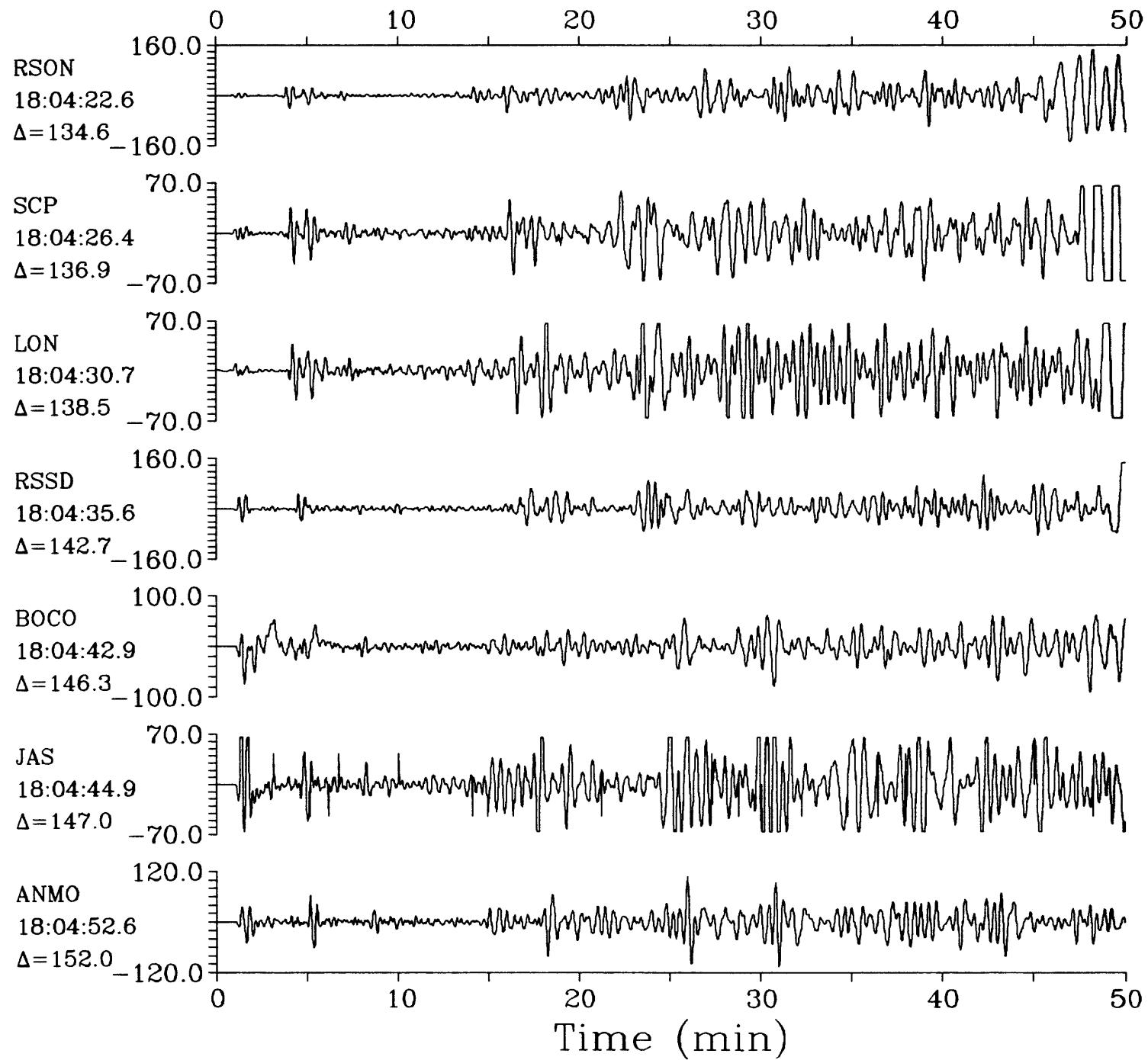


286 LPZ

30 November 1983 17:46:00.67

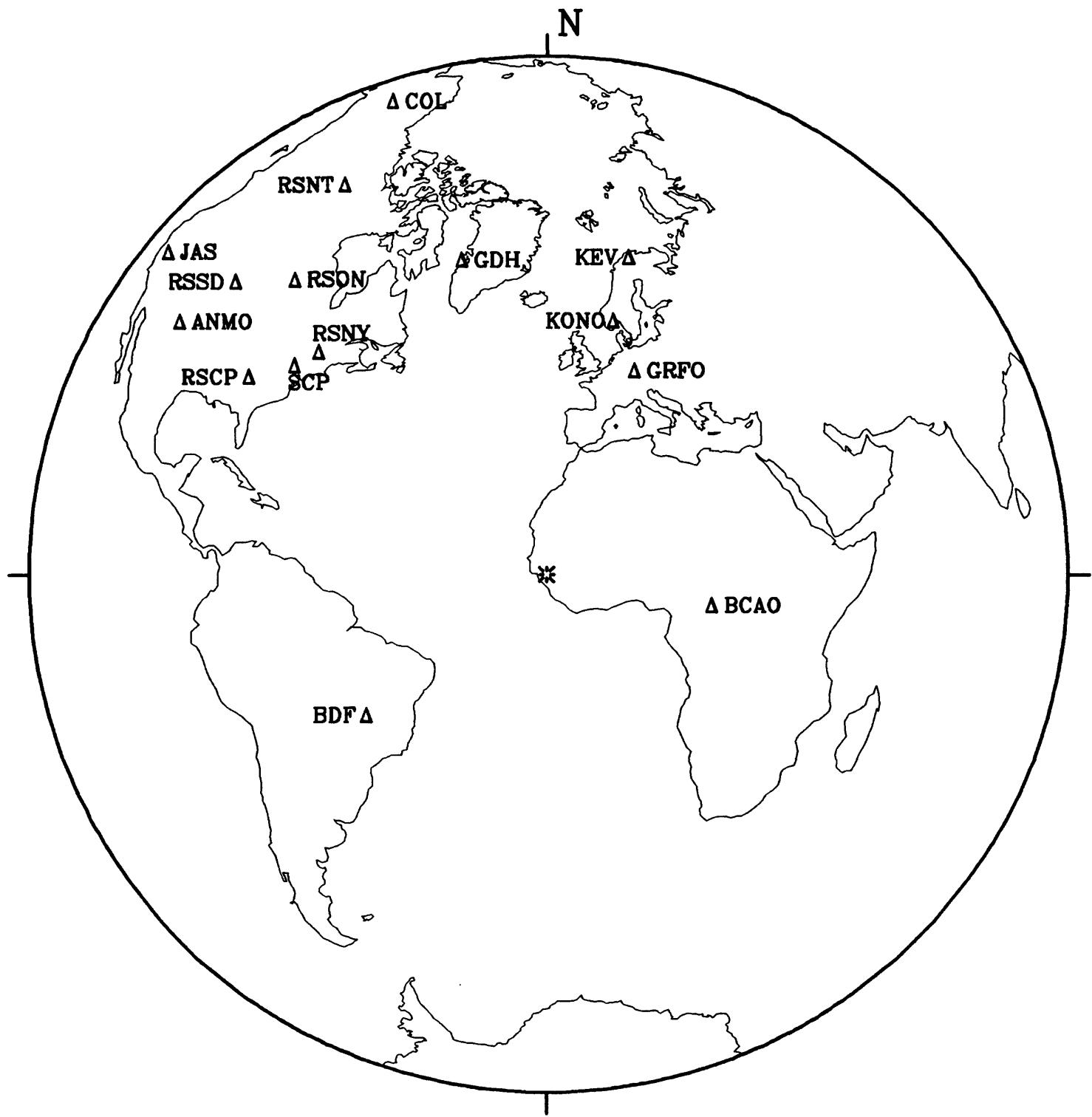
LPZ

Chagos Archipelago Region h=10.0 MB=6.6 ms=7.6



22 December 1983 04:11:29.23

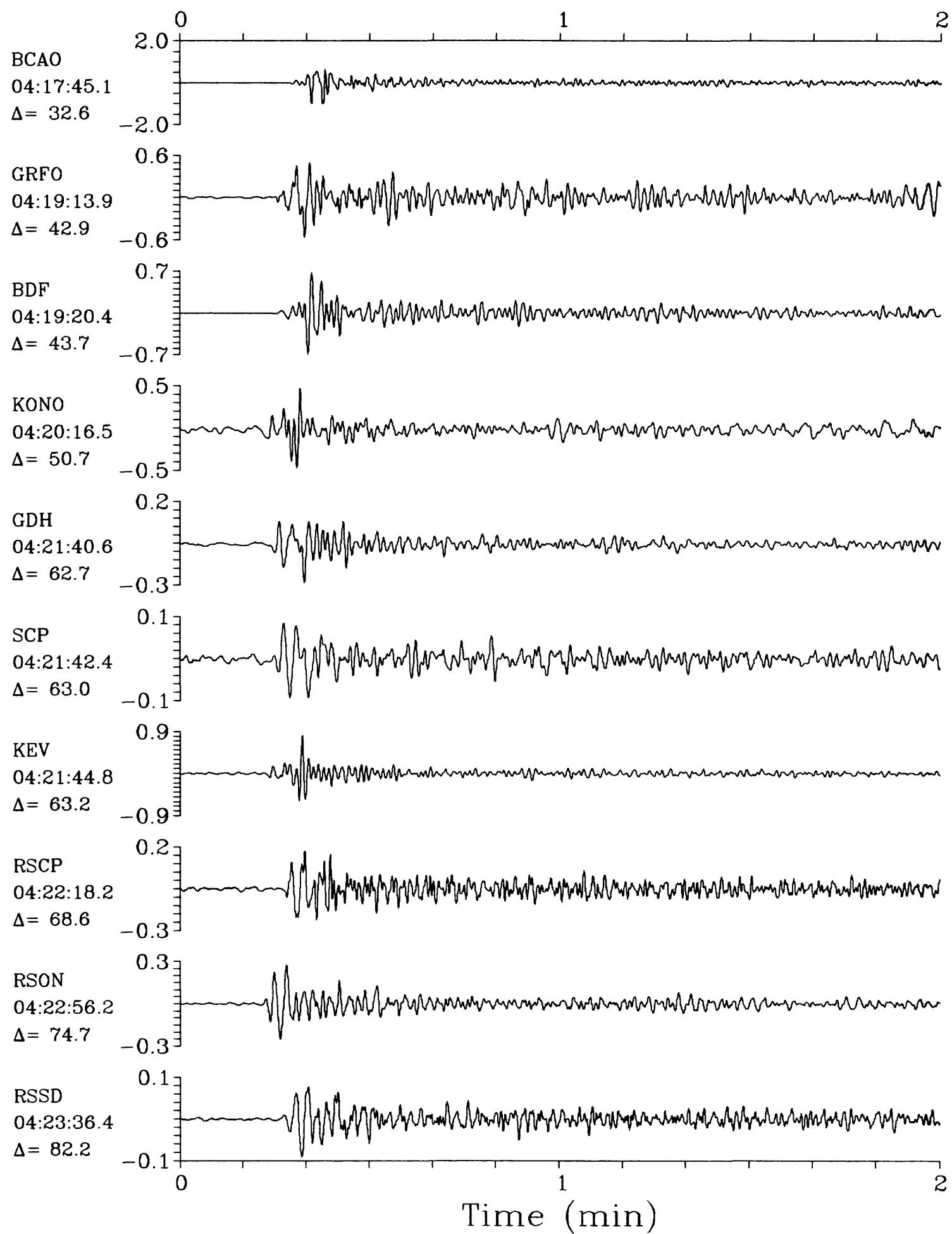
Northwest Africa



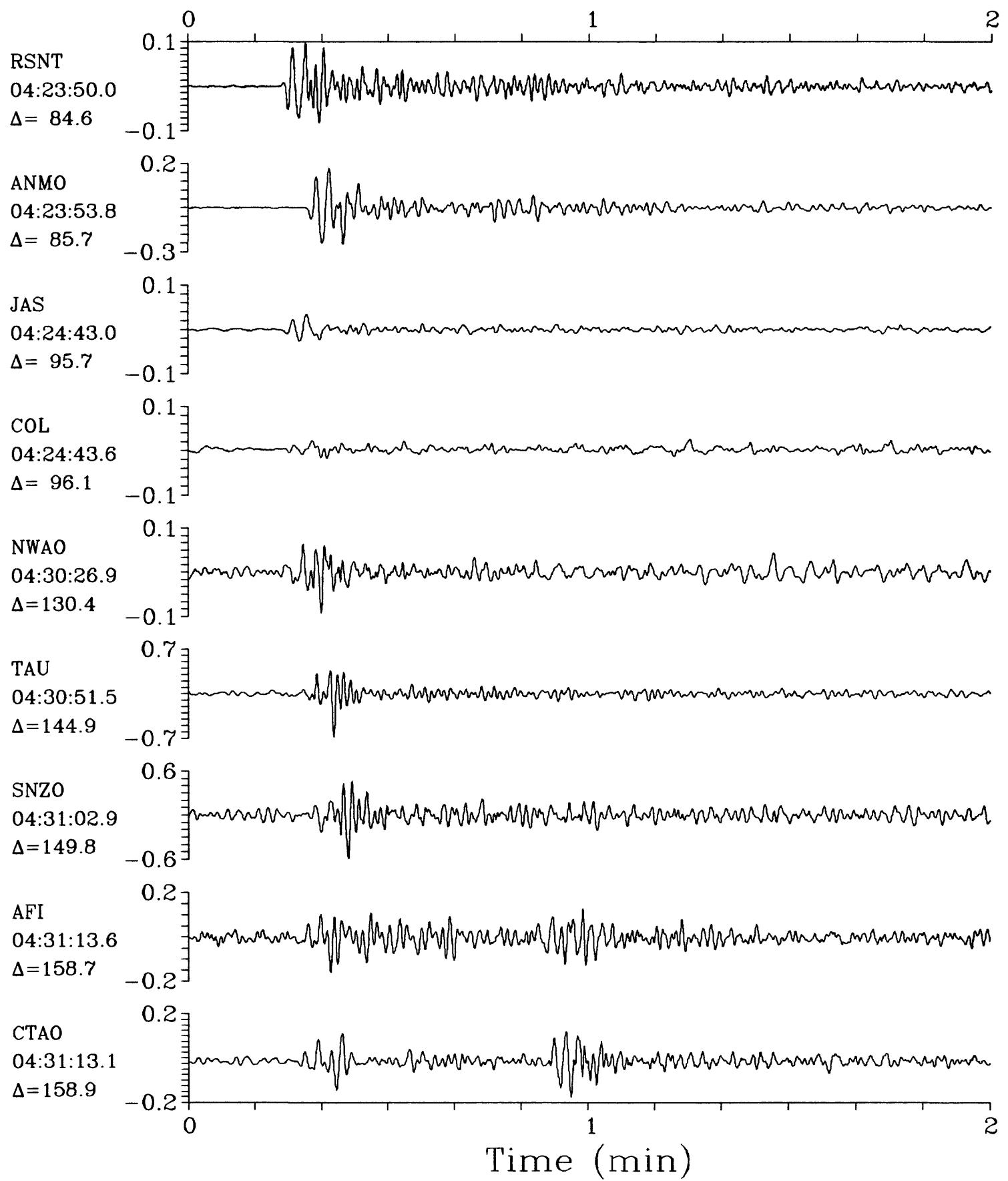
288 SPZ

22 December 1983 04:11:29.23
Northwest Africa h=11.3 MB=6.4 ms=6.2

SPZ



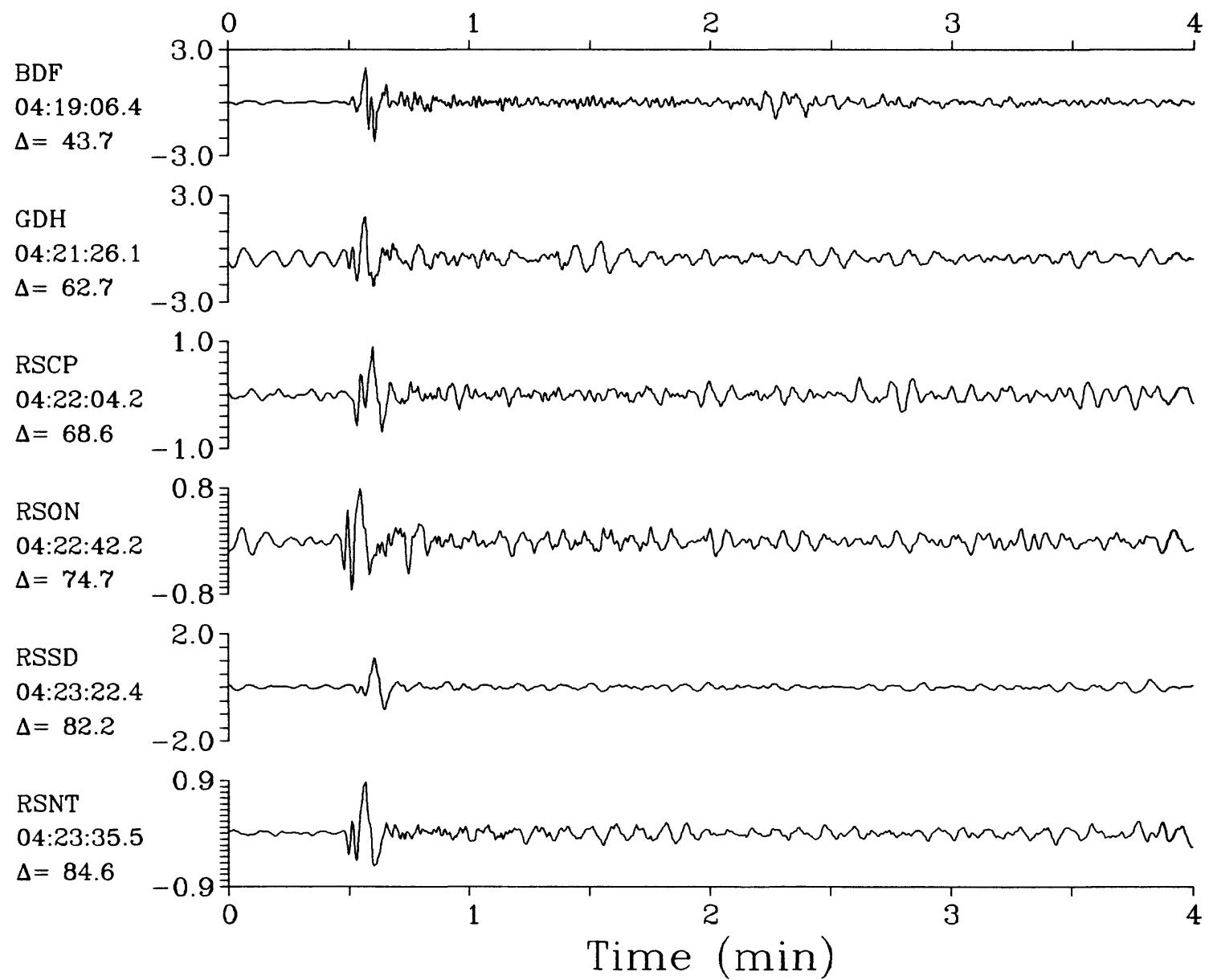
SPZ

22 December 1983 04:11:29.23
Northwest Africa h=11.3 MB=6.4 ms=6.2SPZ²⁸⁹

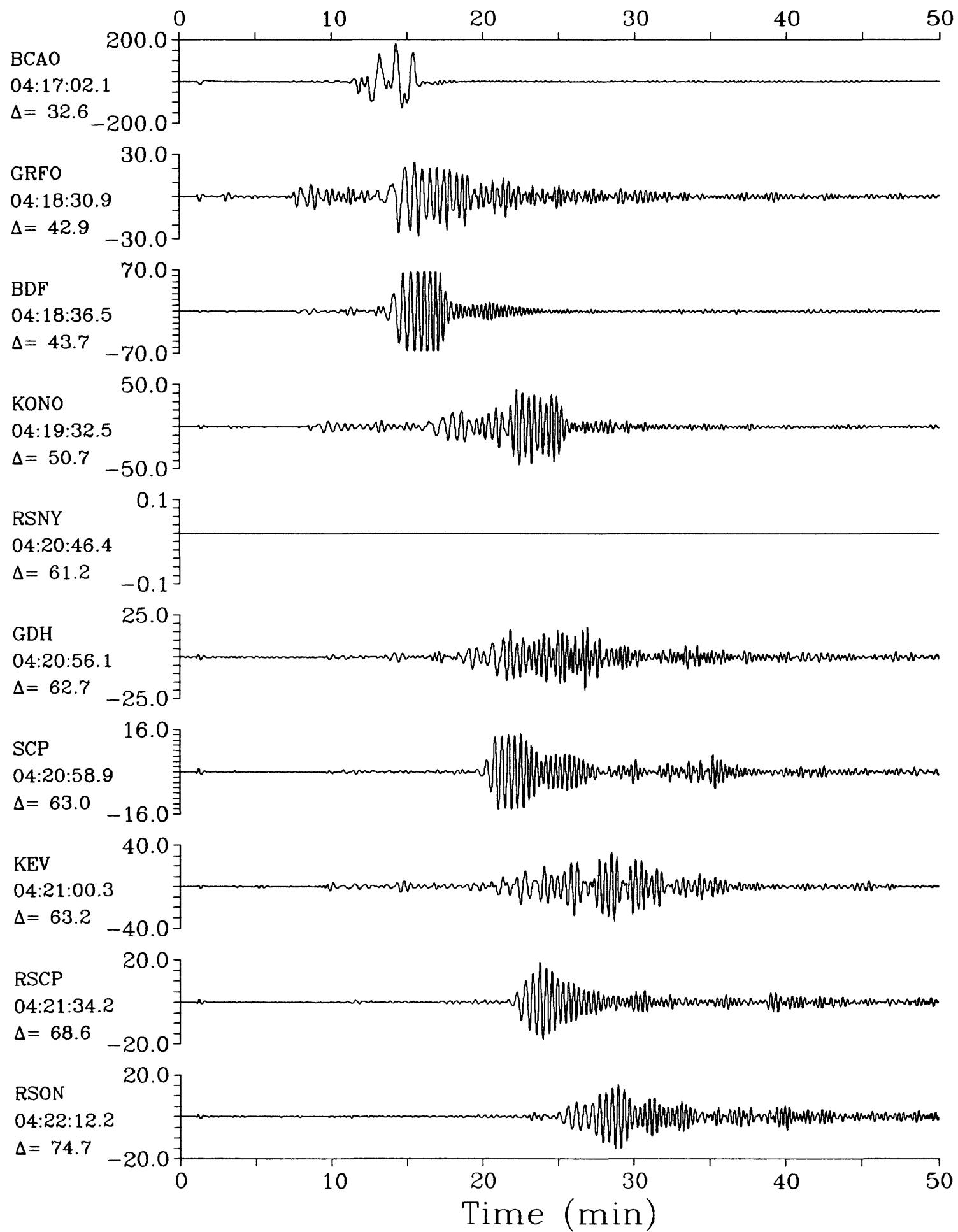
²⁹⁰ IPZ

22 December 1983 04:11:29.23
Northwest Africa h=11.3 MB=6.4 ms=6.2

IPZ



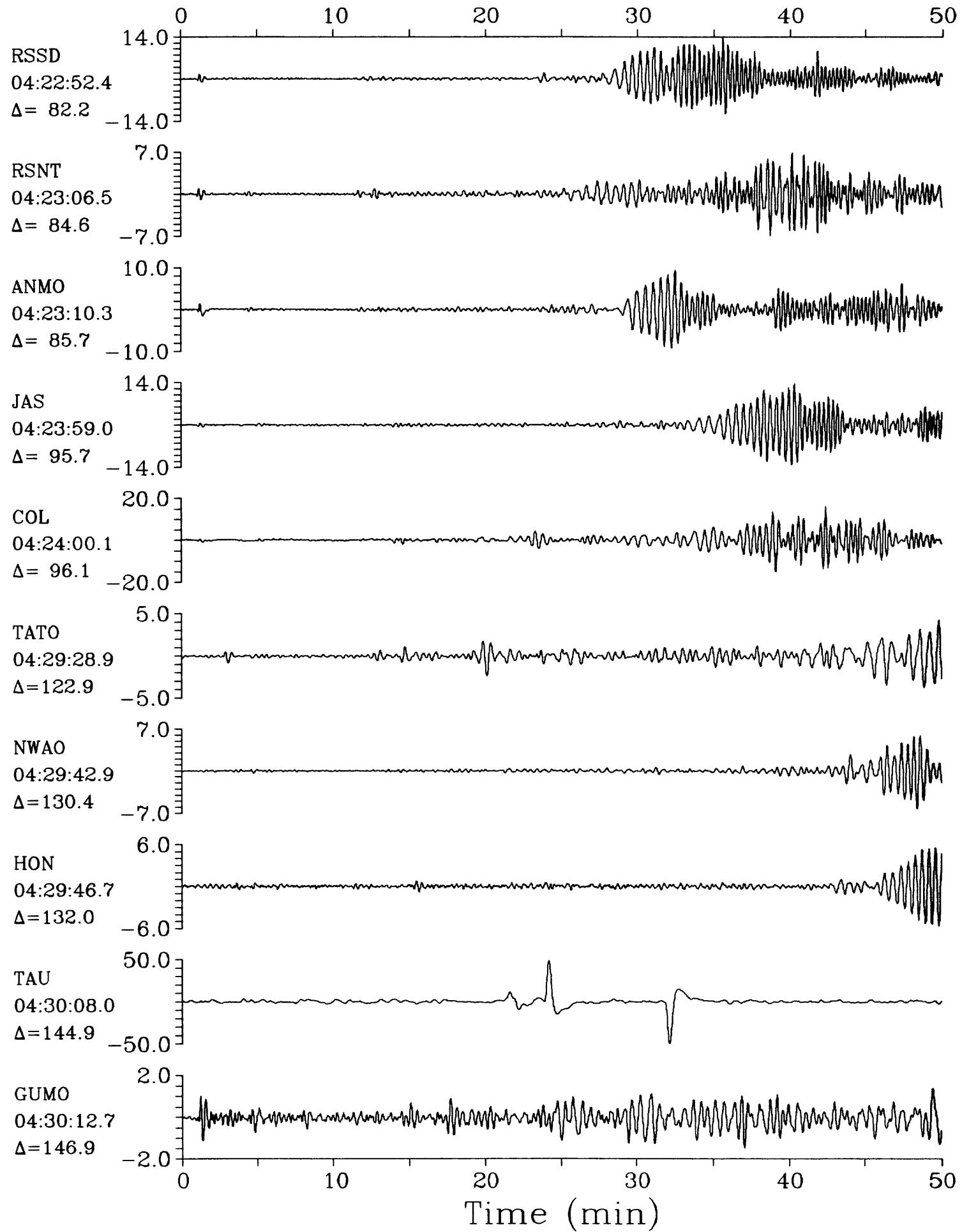
LPZ

22 December 1983 04:11:29.23
Northwest Africa h=11.3 MB=6.4 ms=6.2LPZ²⁹¹

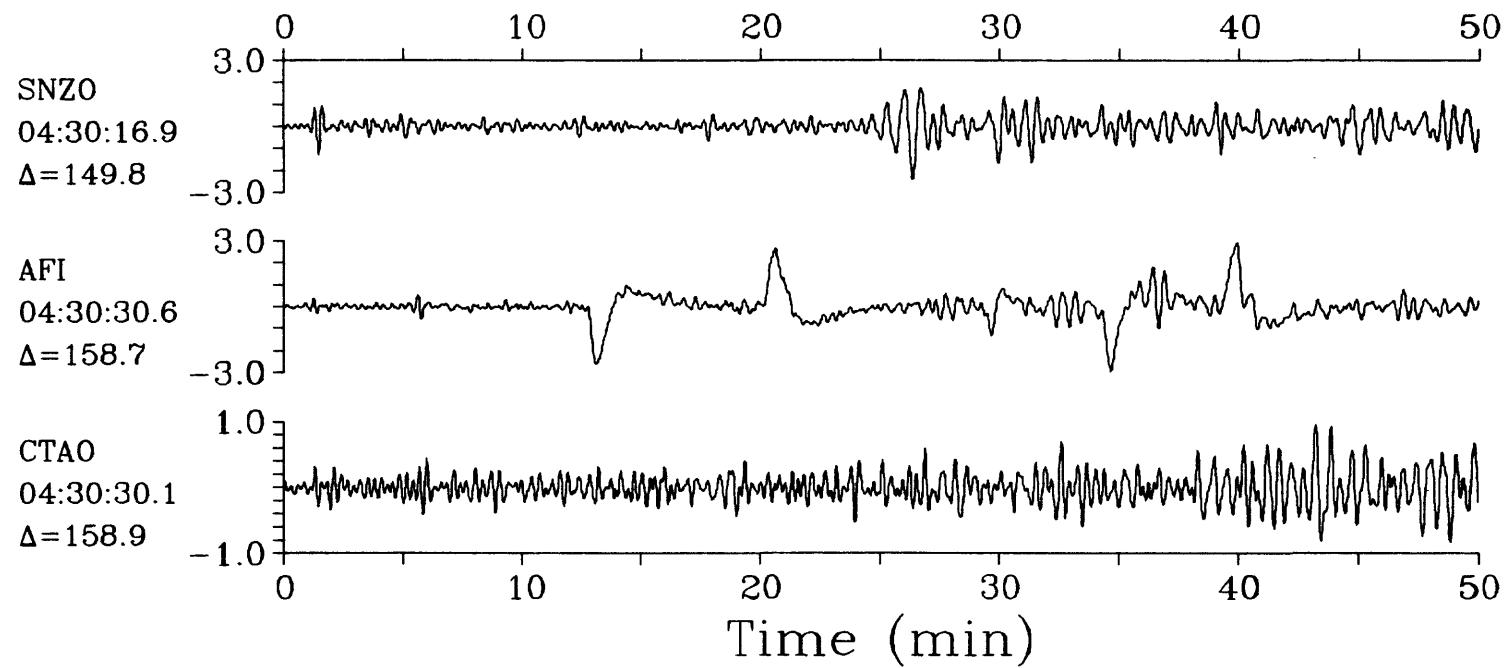
292 LPZ

22 December 1983 04:11:29.23
Northwest Africa h=11.3 MB=6.4 ms=6.2

LPZ

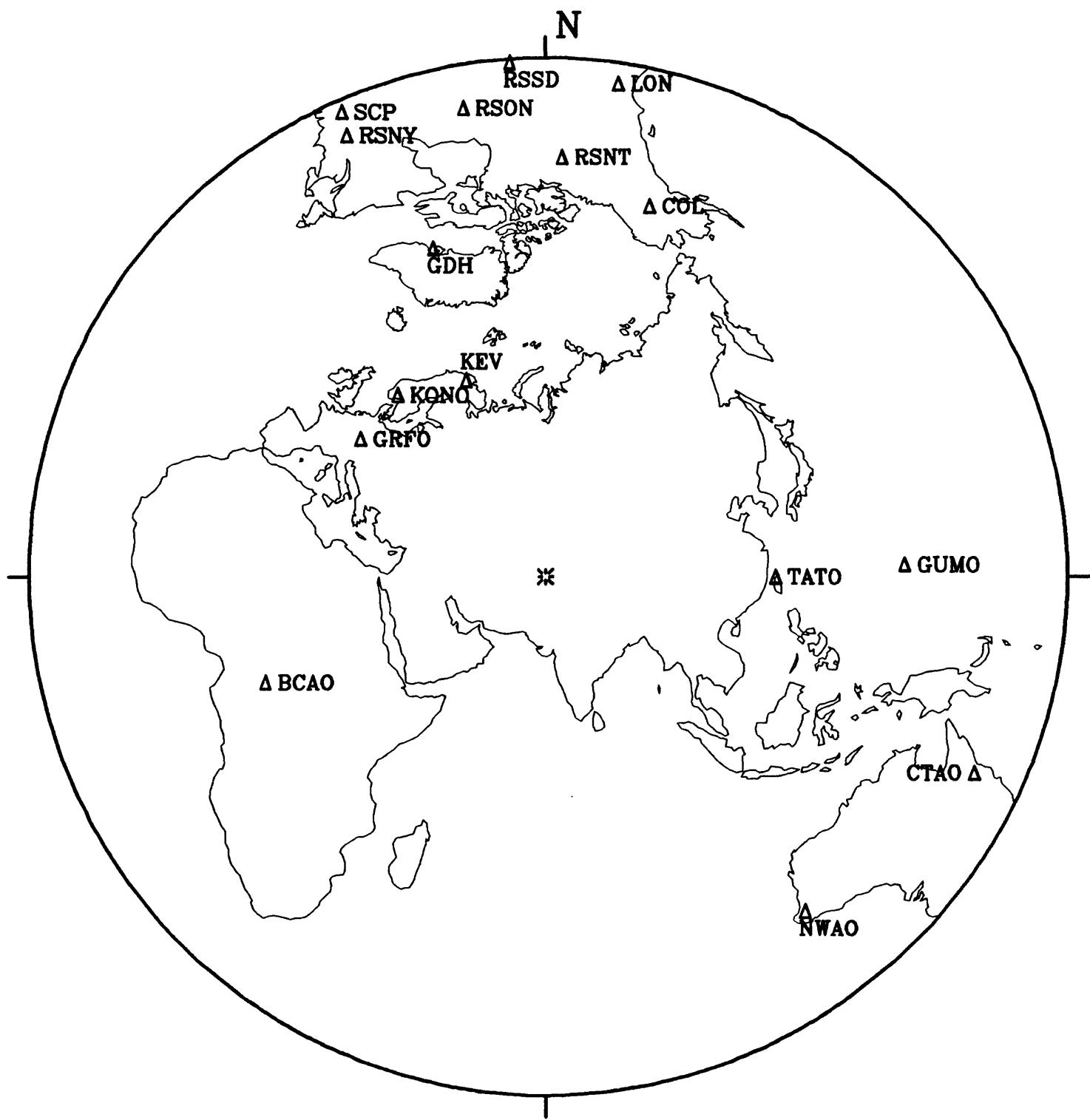


LPZ

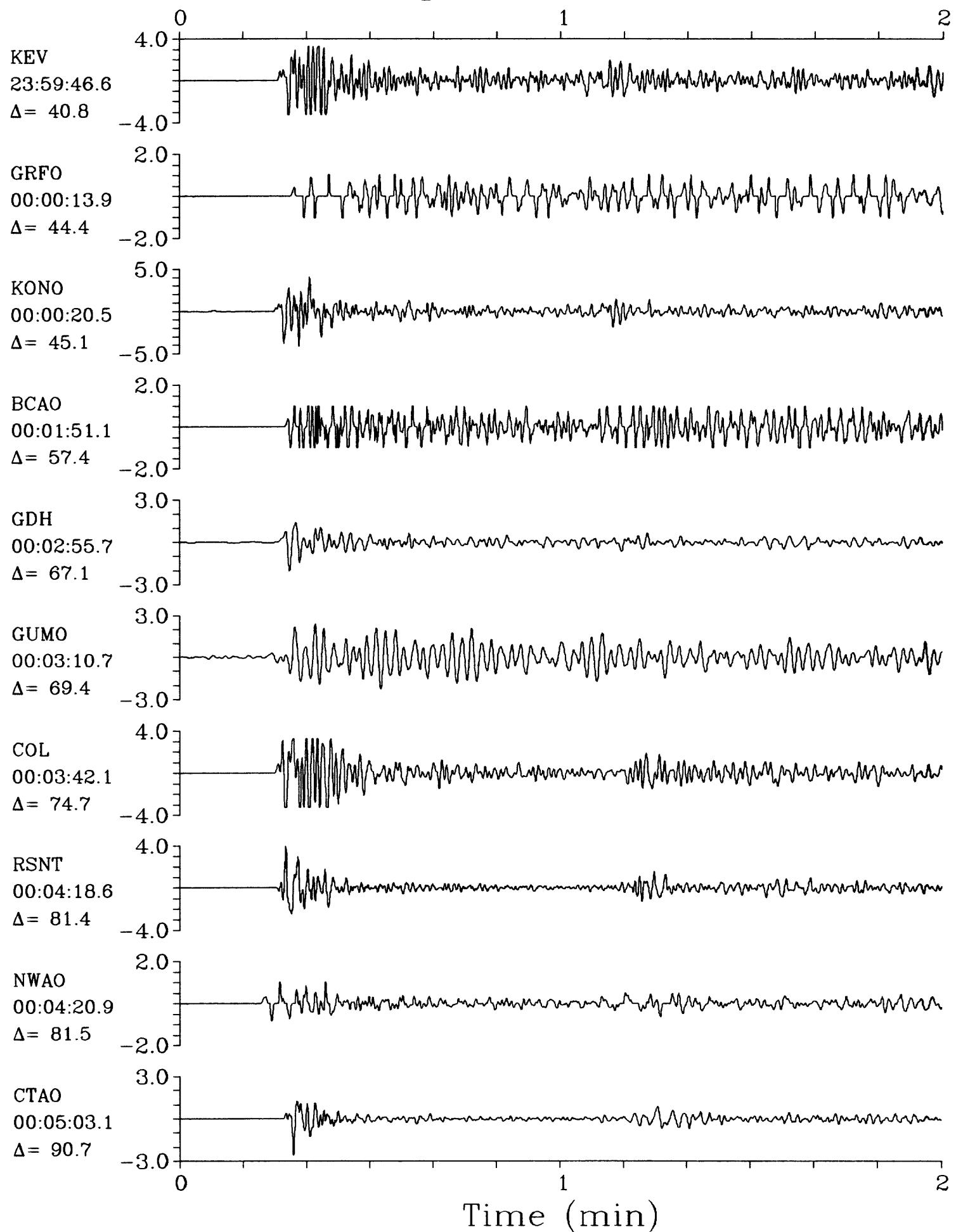
22 December 1983 04:11:29.23
Northwest Africa h=11.3 MB=6.4 ms=6.2LPZ²⁹³

30 December 1983 23:52:39.93

Hindu Kush Region



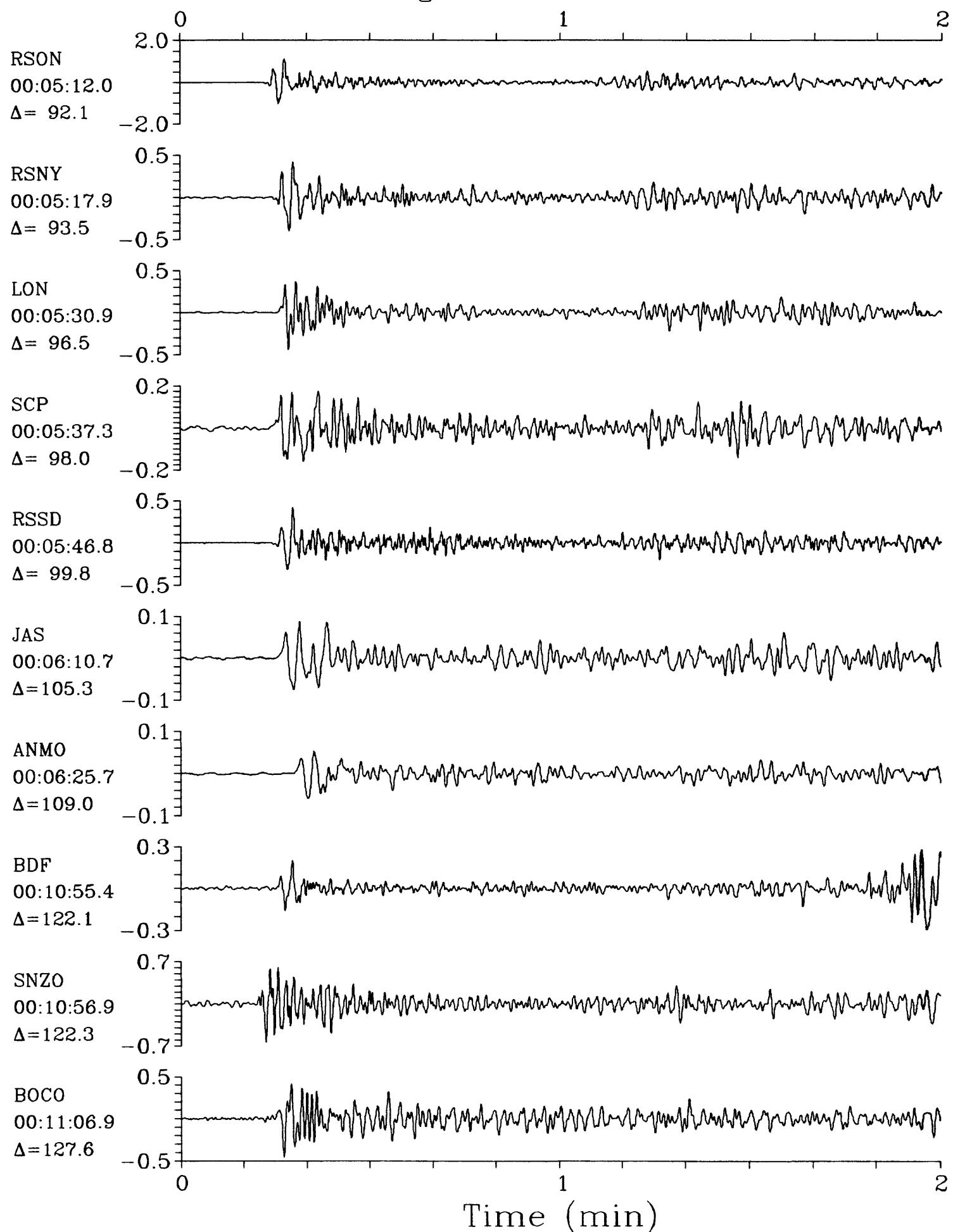
SPZ

30 December 1983 23:52:39.93
Hindu Kush Region h=214.5 MB=6.6SPZ²⁹⁵

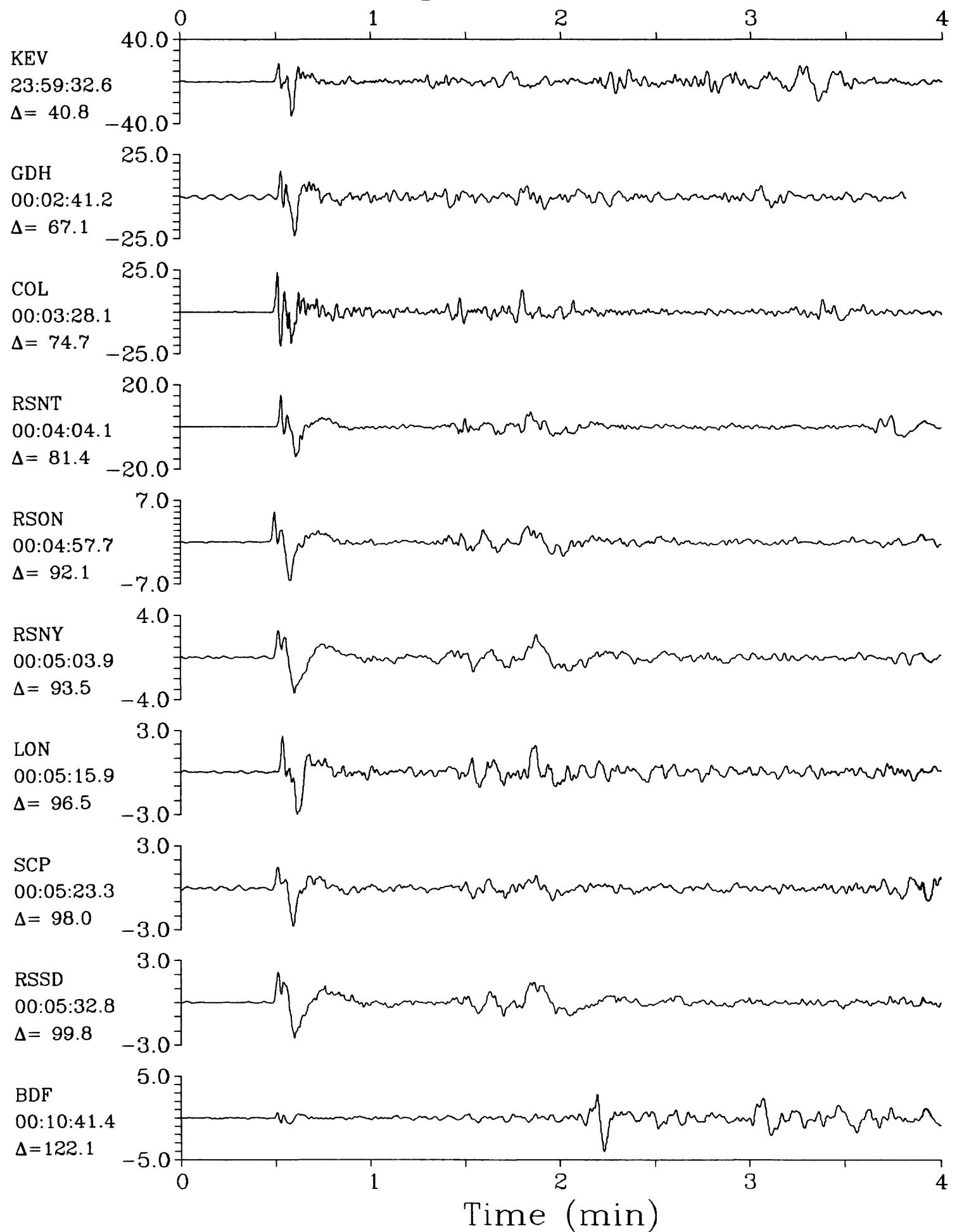
296 SPZ

30 December 1983 23:52:39.93
Hindu Kush Region h=214.5 MB=6.6

SPZ



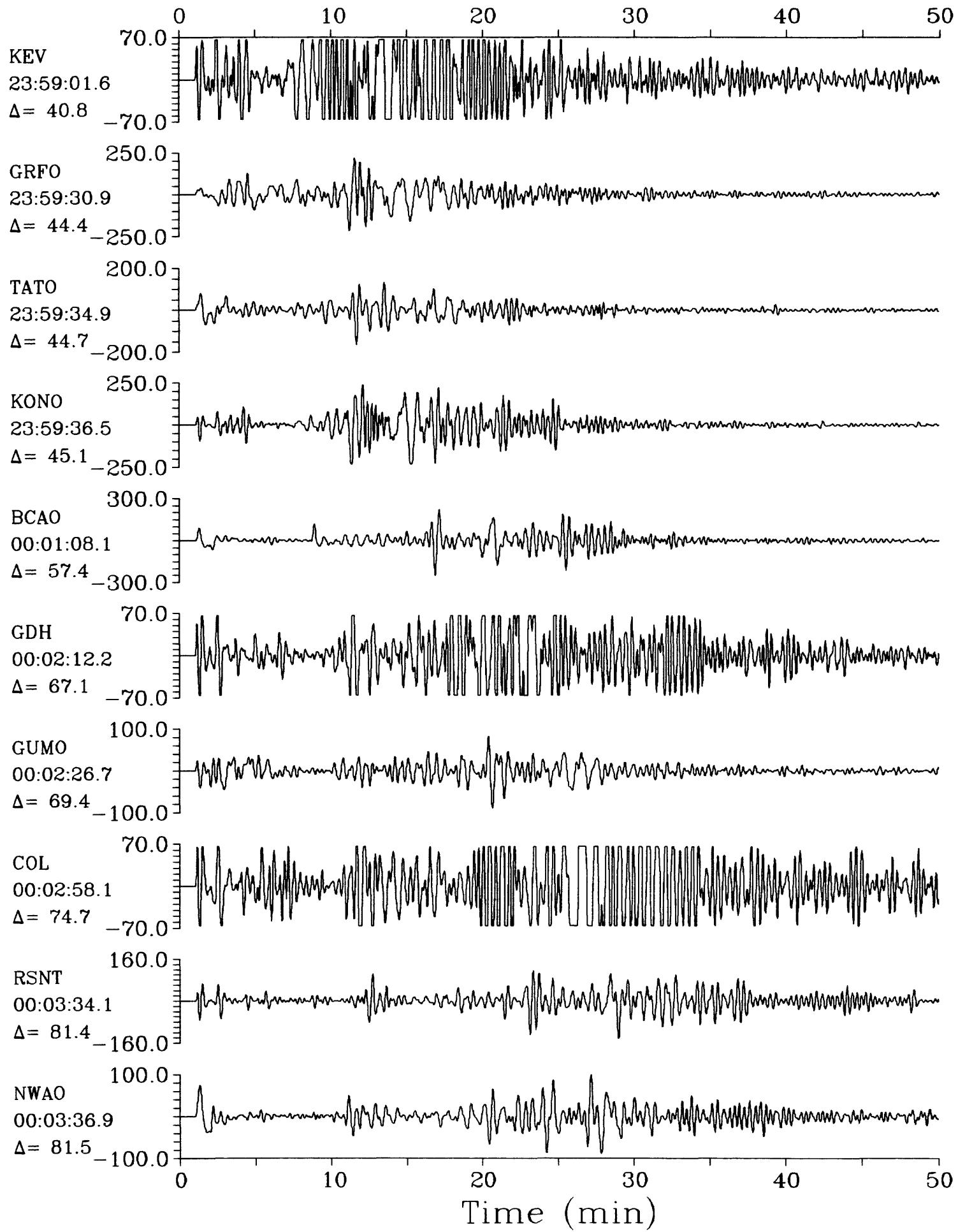
IPZ

30 December 1983 23:52:39.93
Hindu Kush Region h=214.5 MB=6.6IPZ²⁹⁷

298 LPZ

30 December 1983 23:52:39.93
Hindu Kush Region h=214.5 MB=6.6

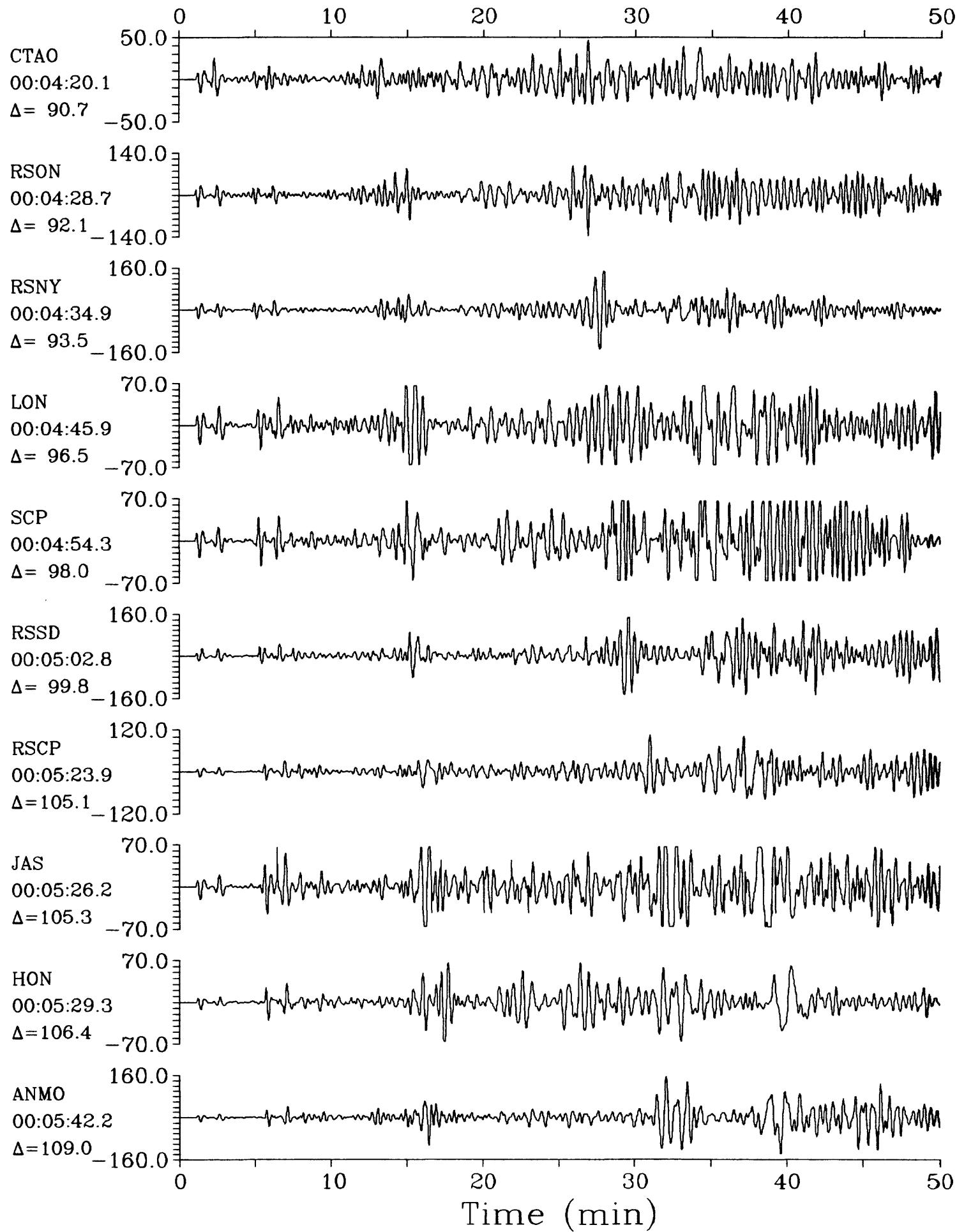
LPZ



LPZ

30 December 1983 23:52:39.93
Hindu Kush Region h=214.5 MB=6.6

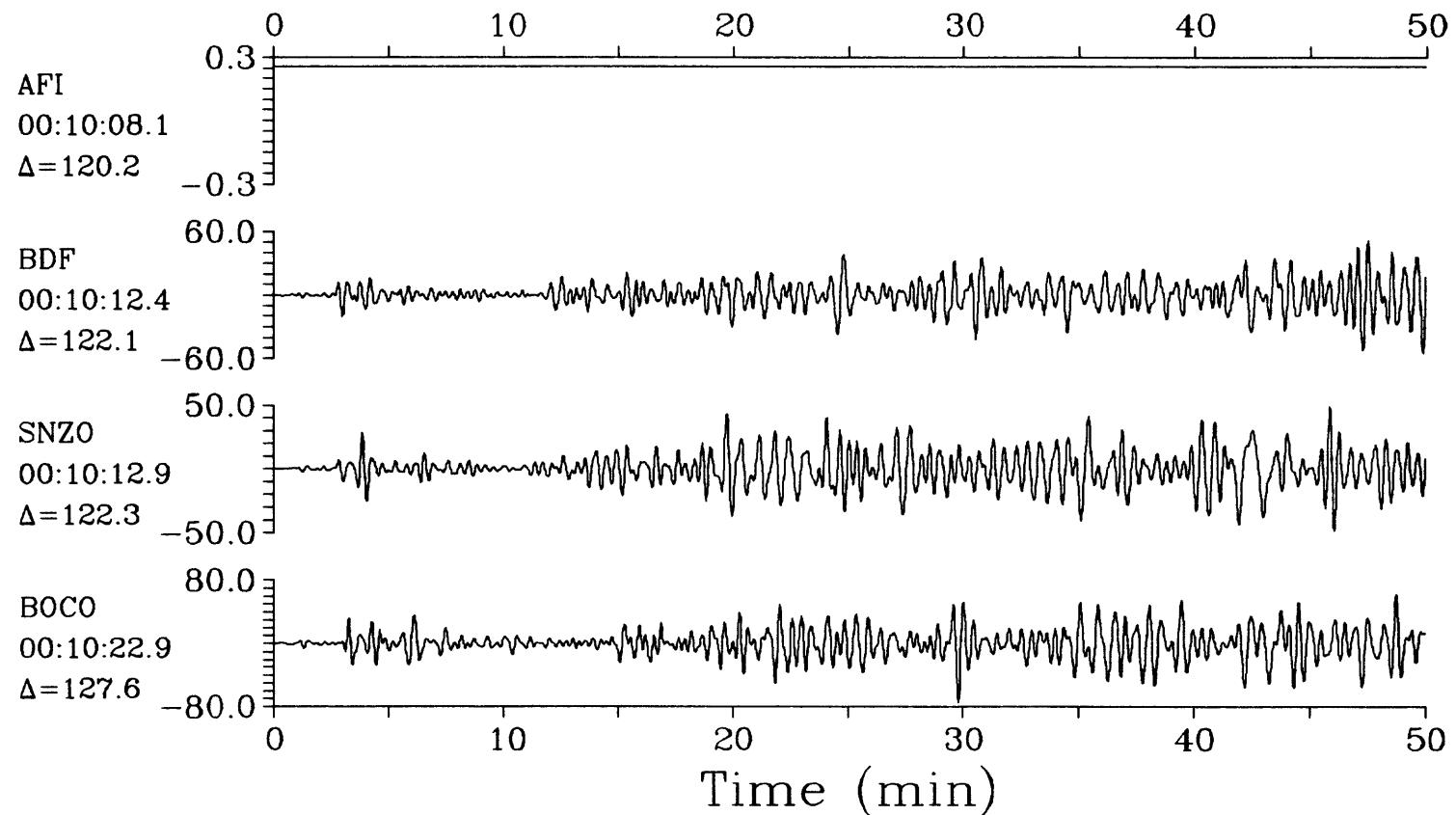
LPZ 299



300 LPZ

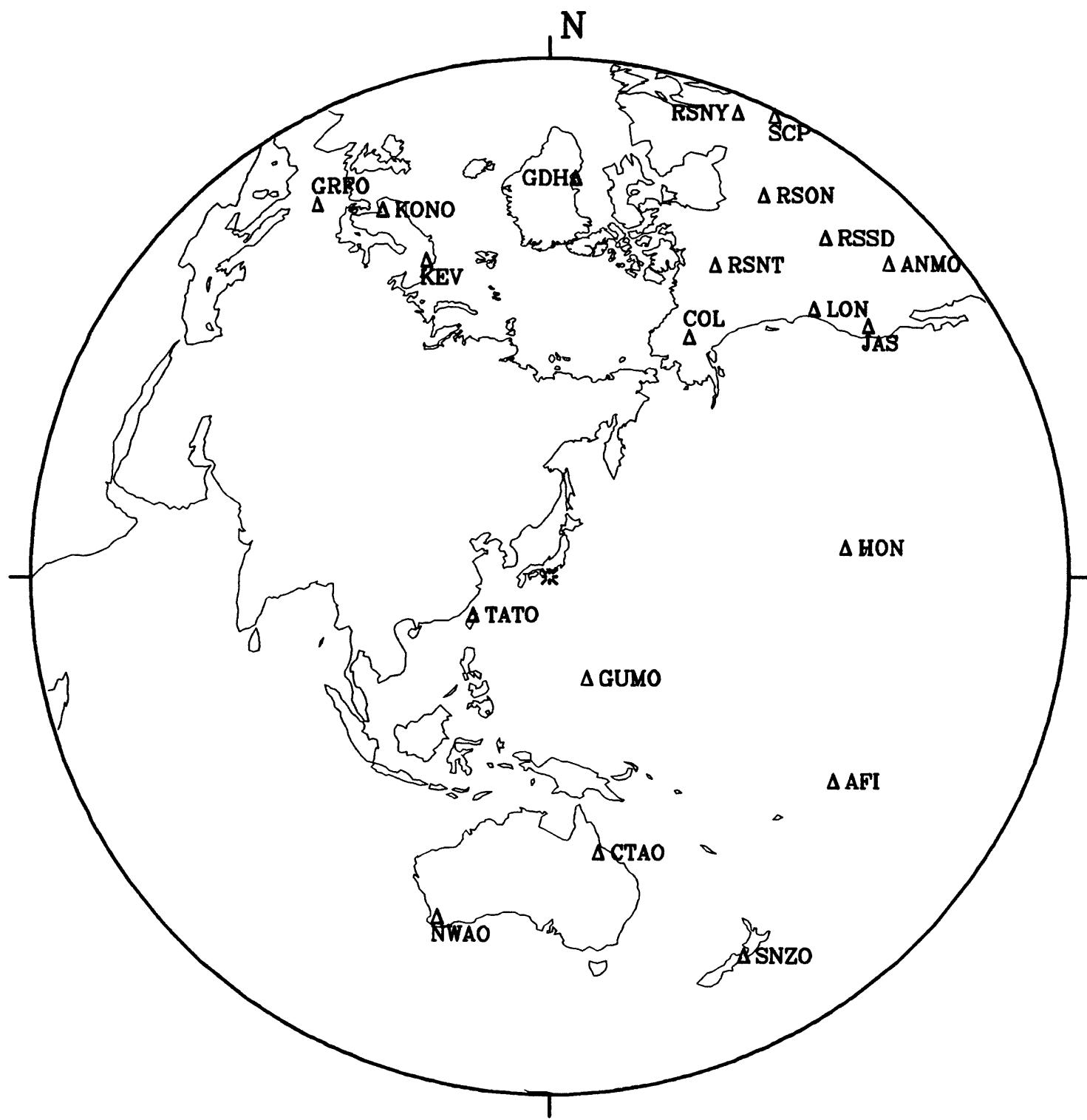
30 December 1983 23:52:39.93
Hindu Kush Region h=214.5 MB=6.6

LPZ



01 January 1984 09:03:37.59

Near S. Coast of Honshu, Japan

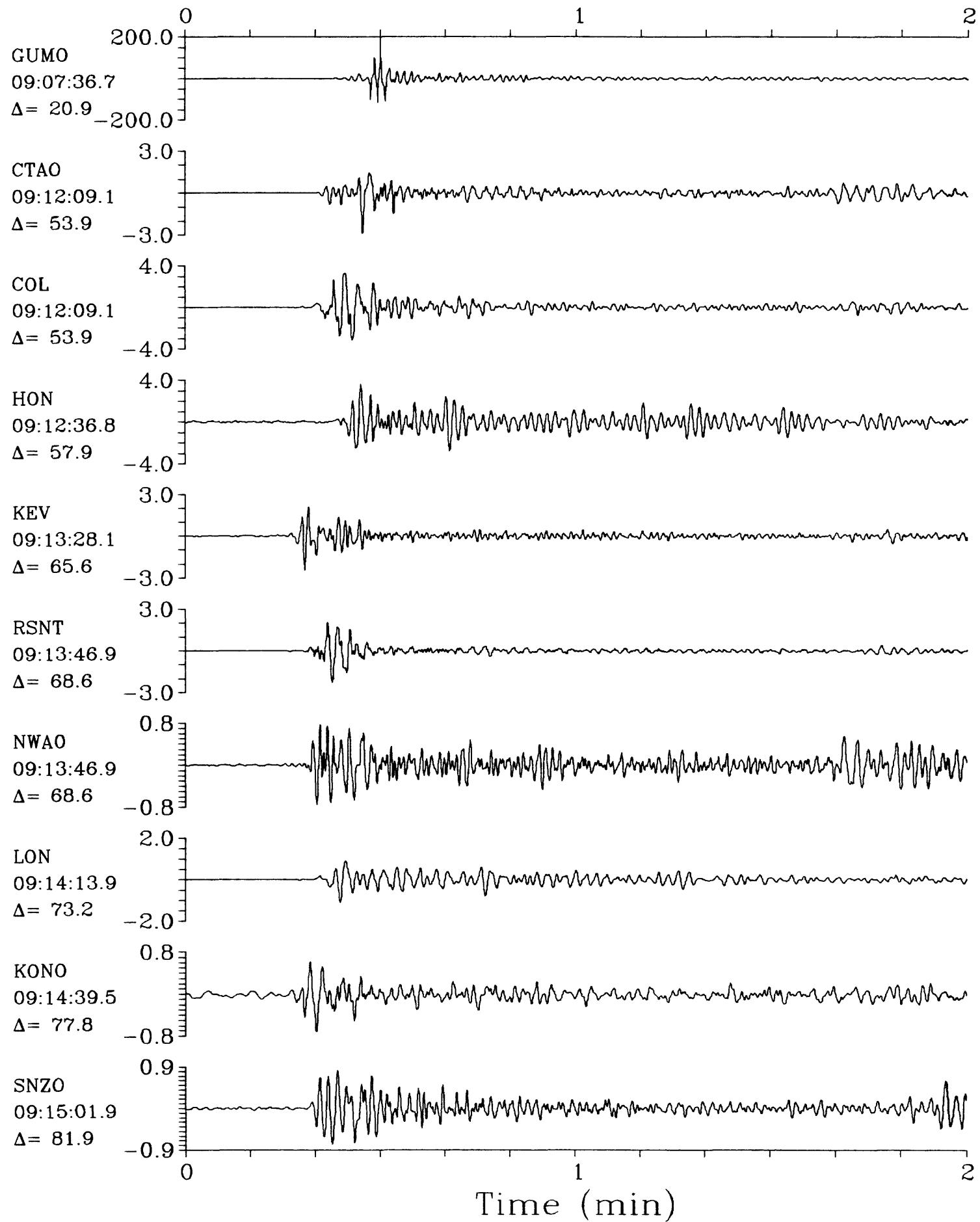


302SPZ

01 January 1984 09:03:37.59

SPZ

Near S. Coast of Honshu, Japan h=374.2 MB=6.5

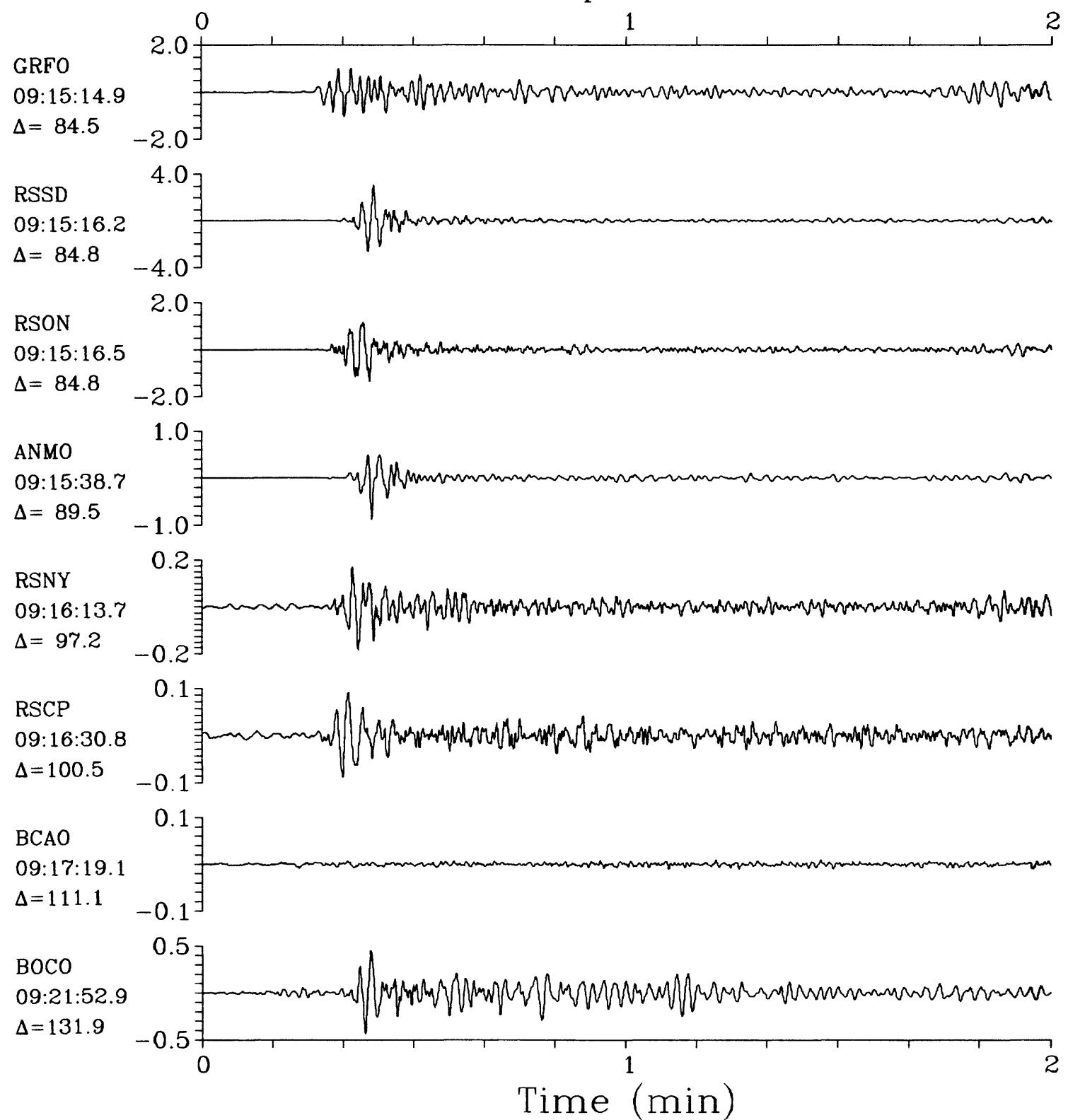


SPZ

01 January 1984 09:03:37.59

SPZ³⁰³

Near S. Coast of Honshu, Japan h=374.2 MB=6.5

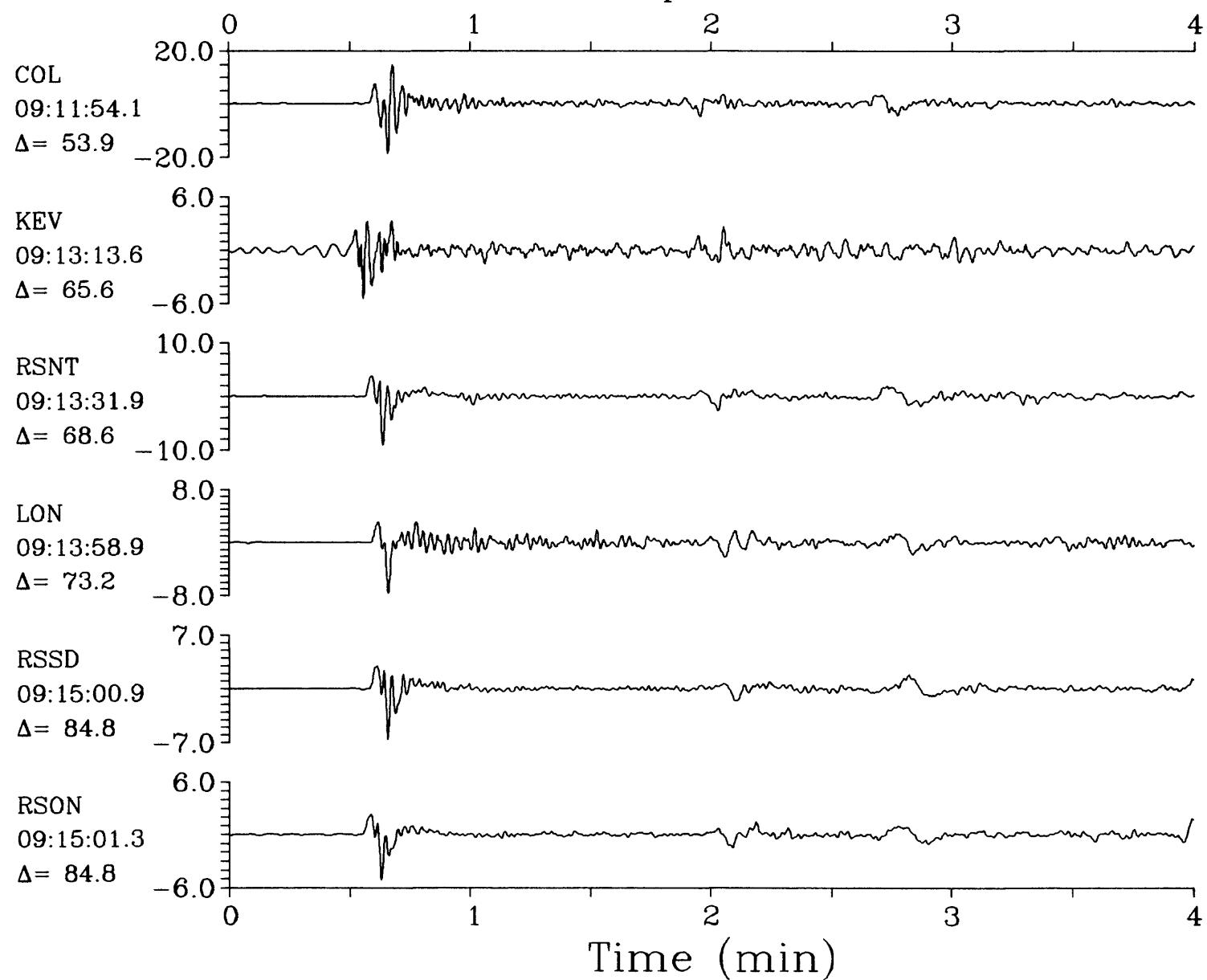


304 IPZ

01 January 1984 09:03:37.59

IPZ

Near S. Coast of Honshu, Japan h=374.2 MB=6.5

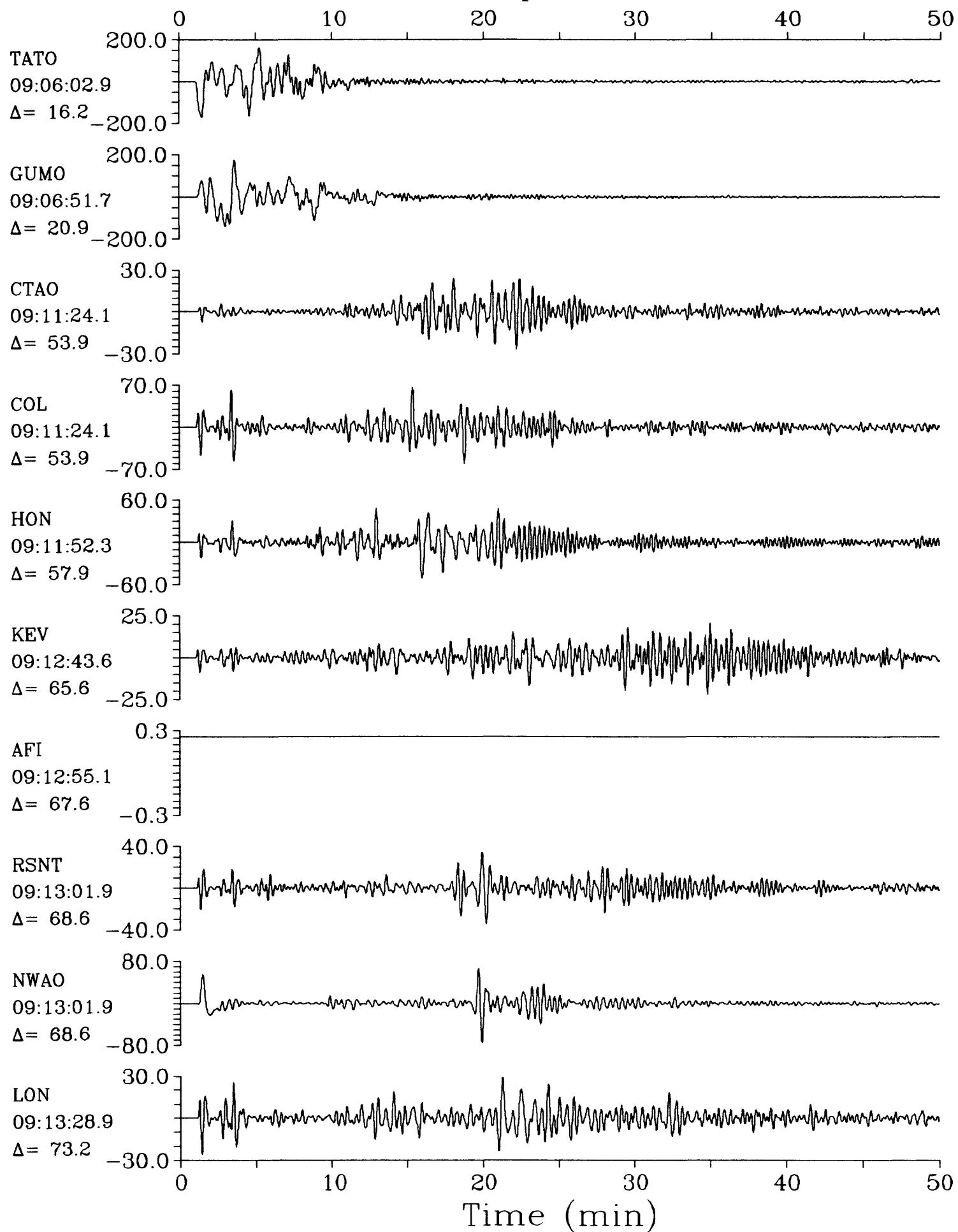


LPZ

01 January 1984 09:03:37.59

LPZ 305

Near S. Coast of Honshu, Japan h=374.2 MB=6.5

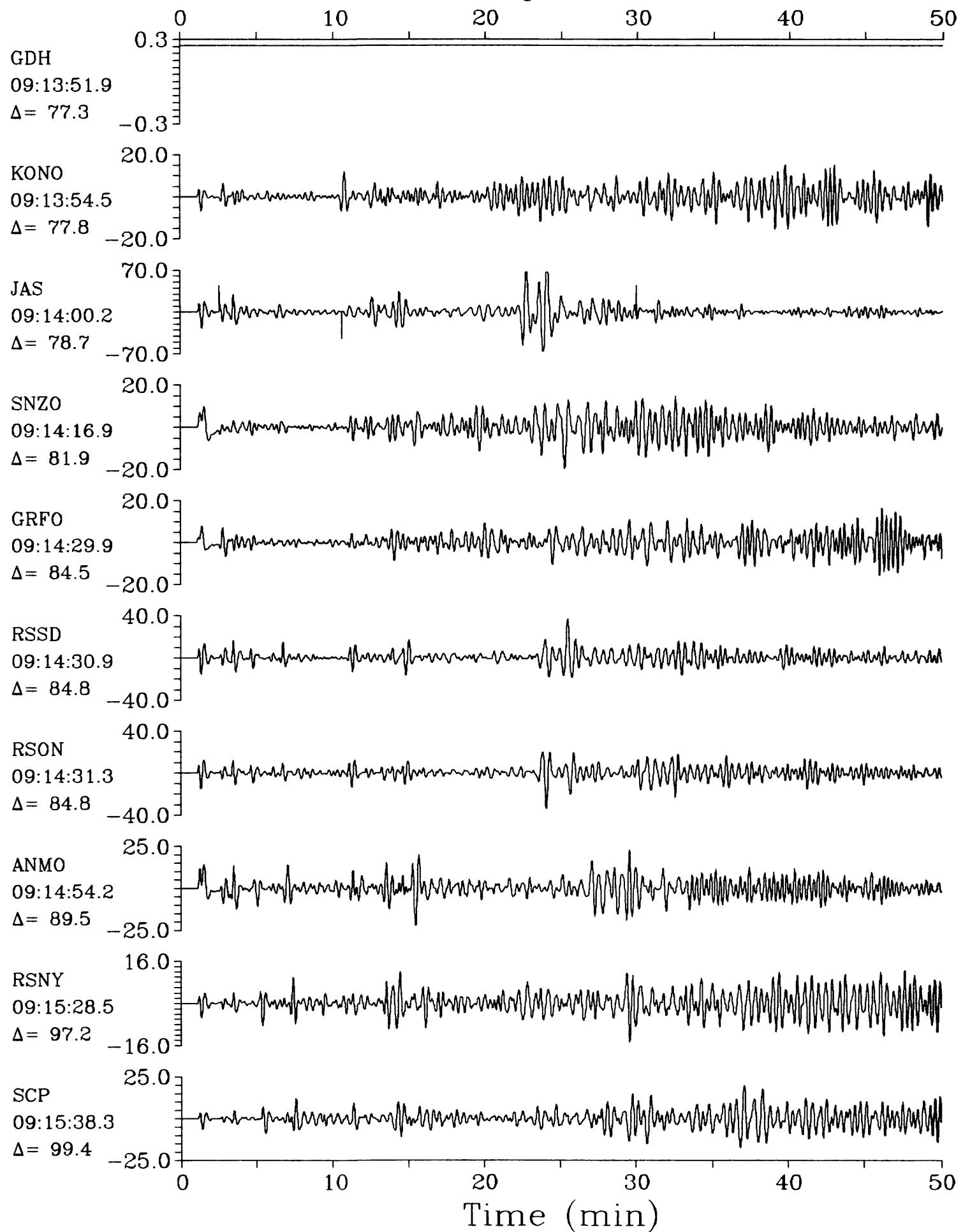


306 LPZ

01 January 1984 09:03:37.59

LPZ

Near S. Coast of Honshu, Japan h=374.2 MB=6.5

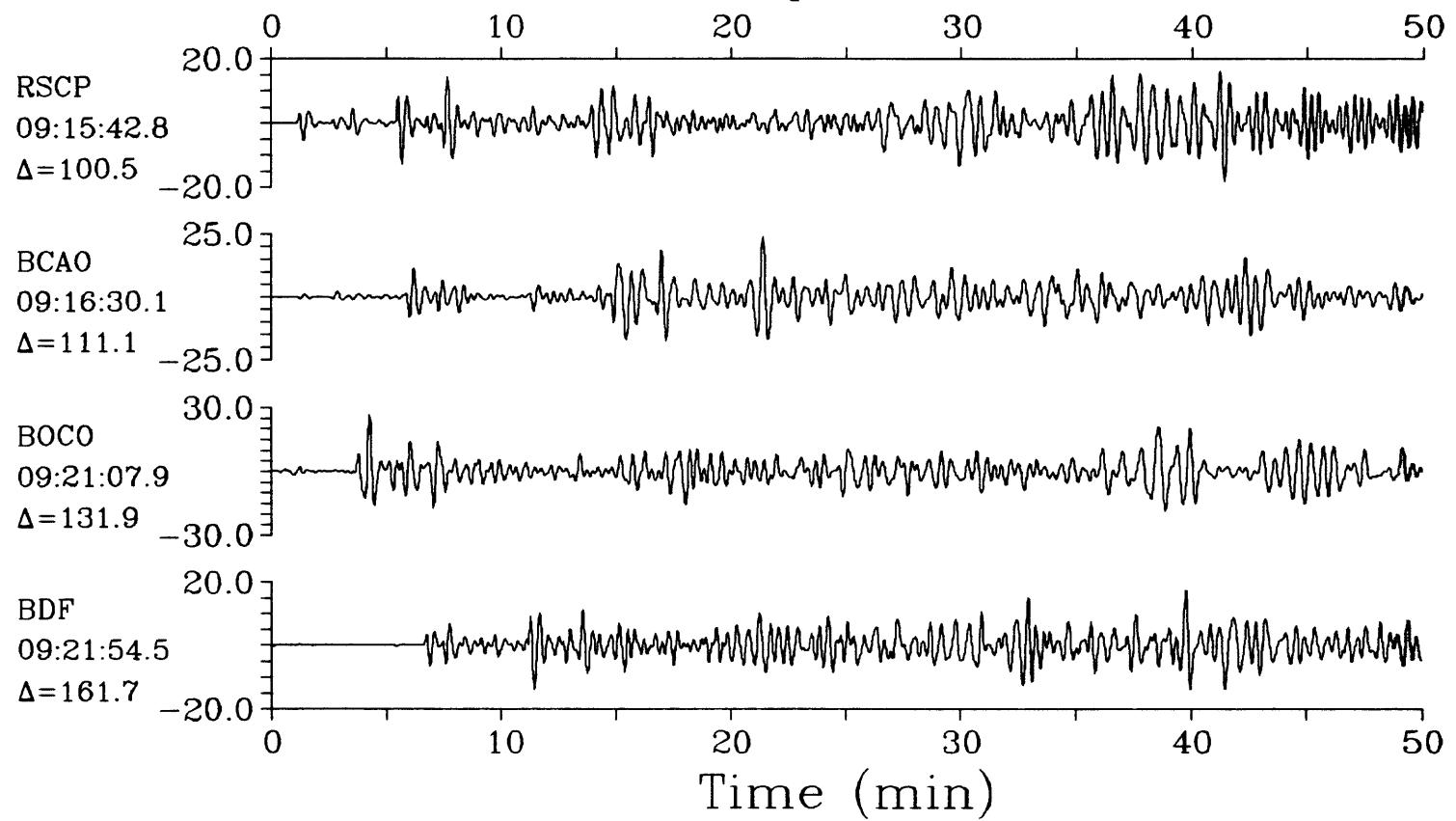


LPZ

01 January 1984 09:03:37.59

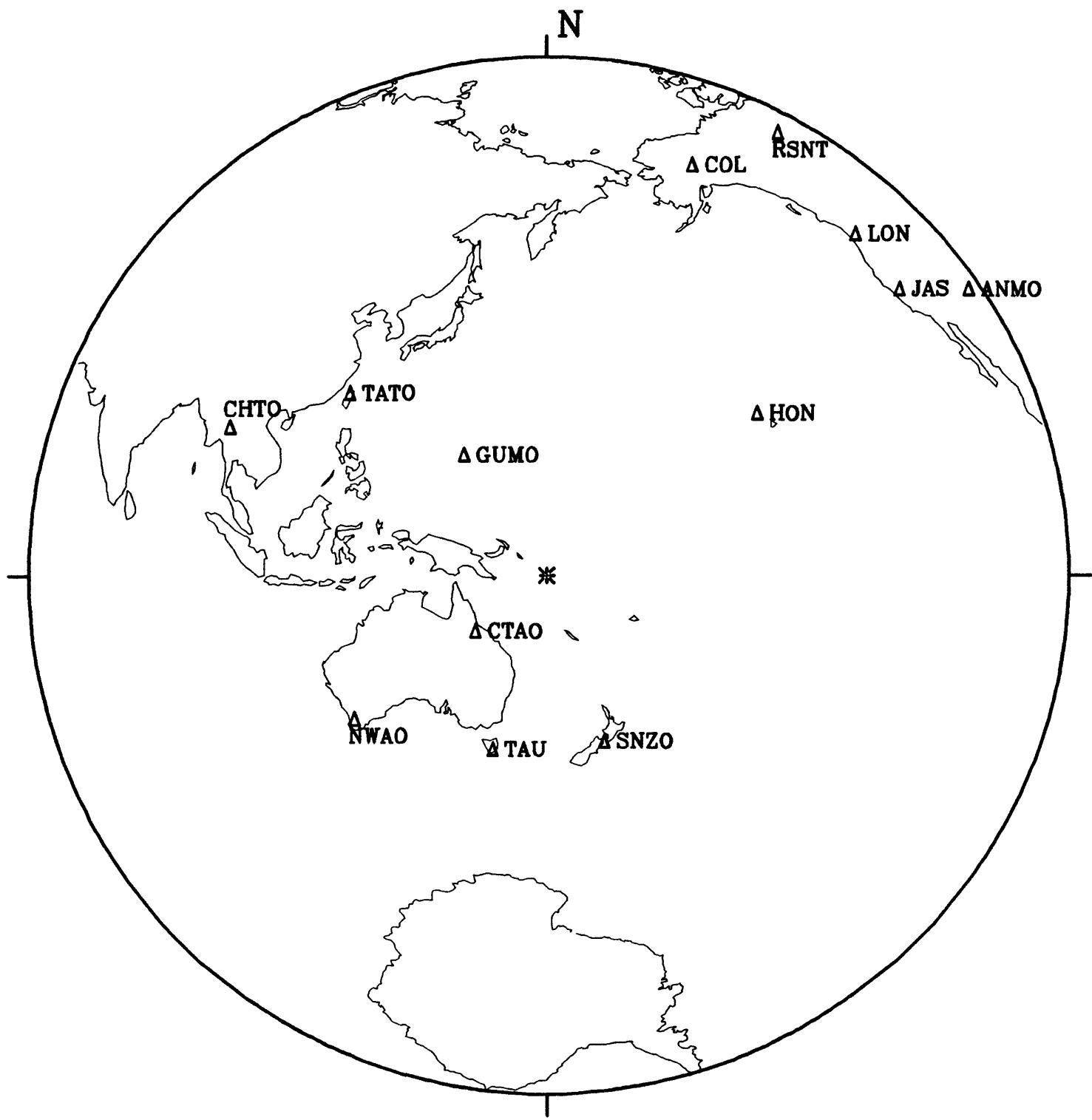
LPZ³⁰⁷

Near S. Coast of Honshu, Japan h=374.2 MB=6.5

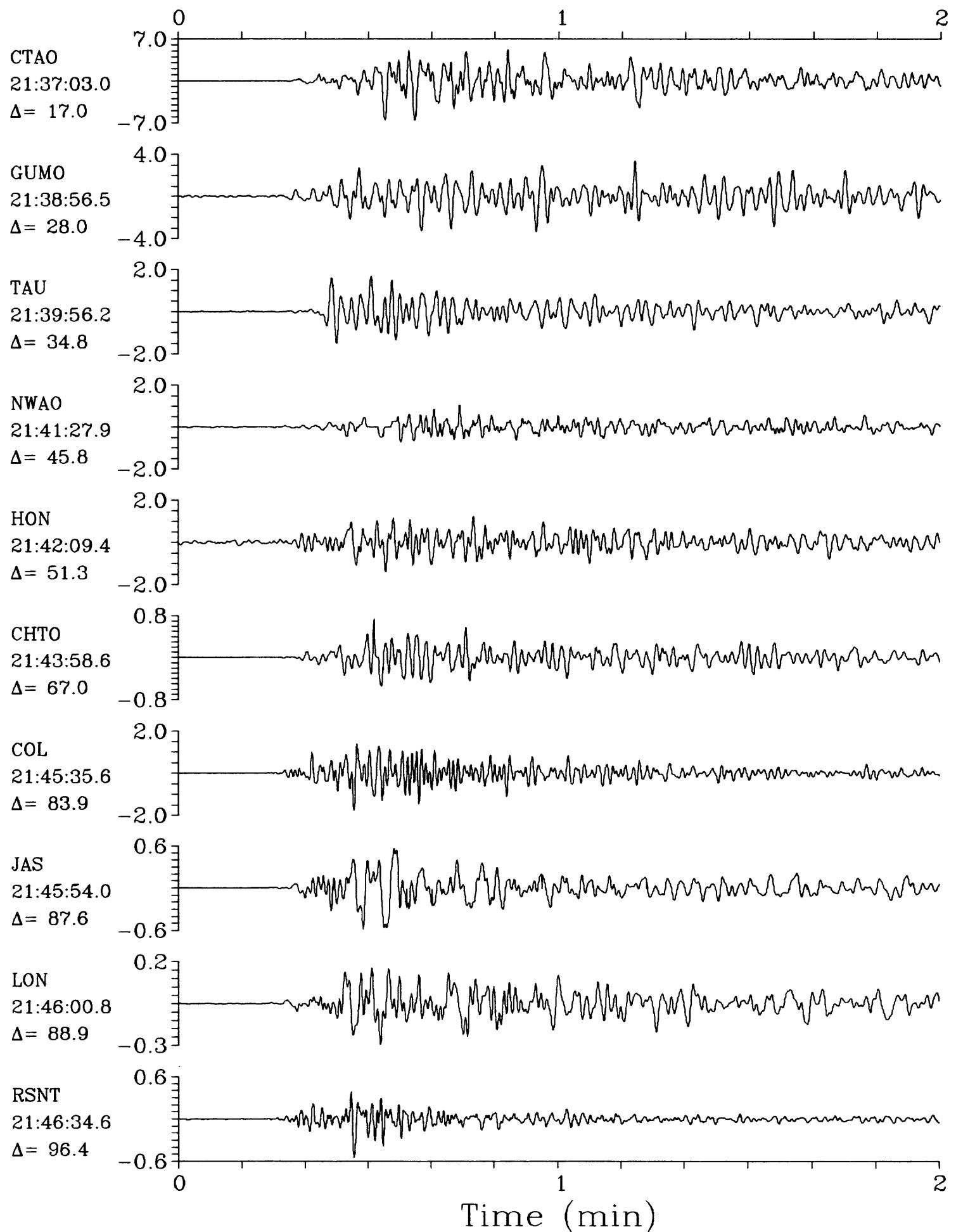


07 February 1984 21:33:20.50

Solomon Islands



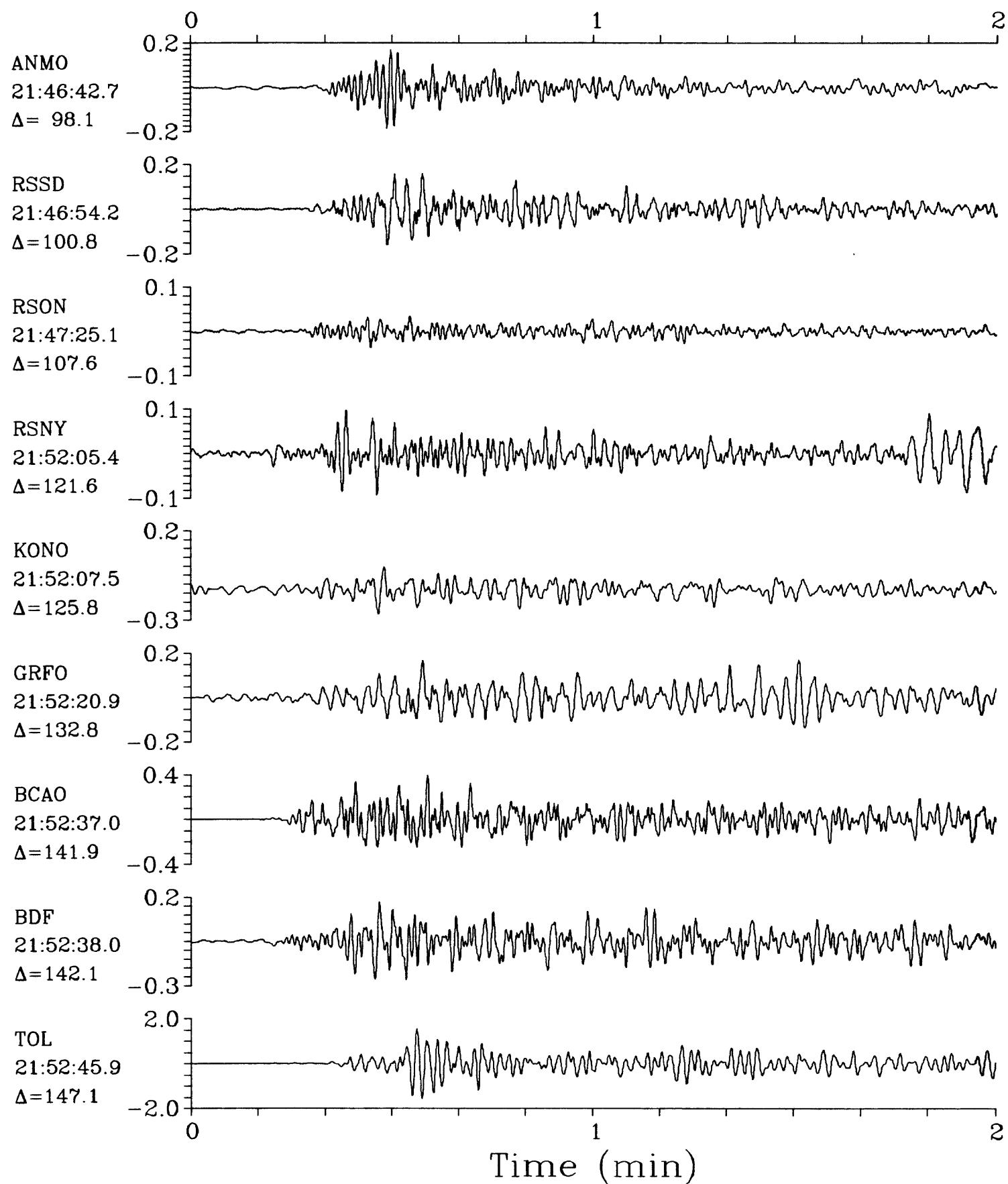
SPZ

07 February 1984 21:33:20.50
Solomon Islands h=14.2 MB=6.5 ms=7.5SPZ³⁰⁹

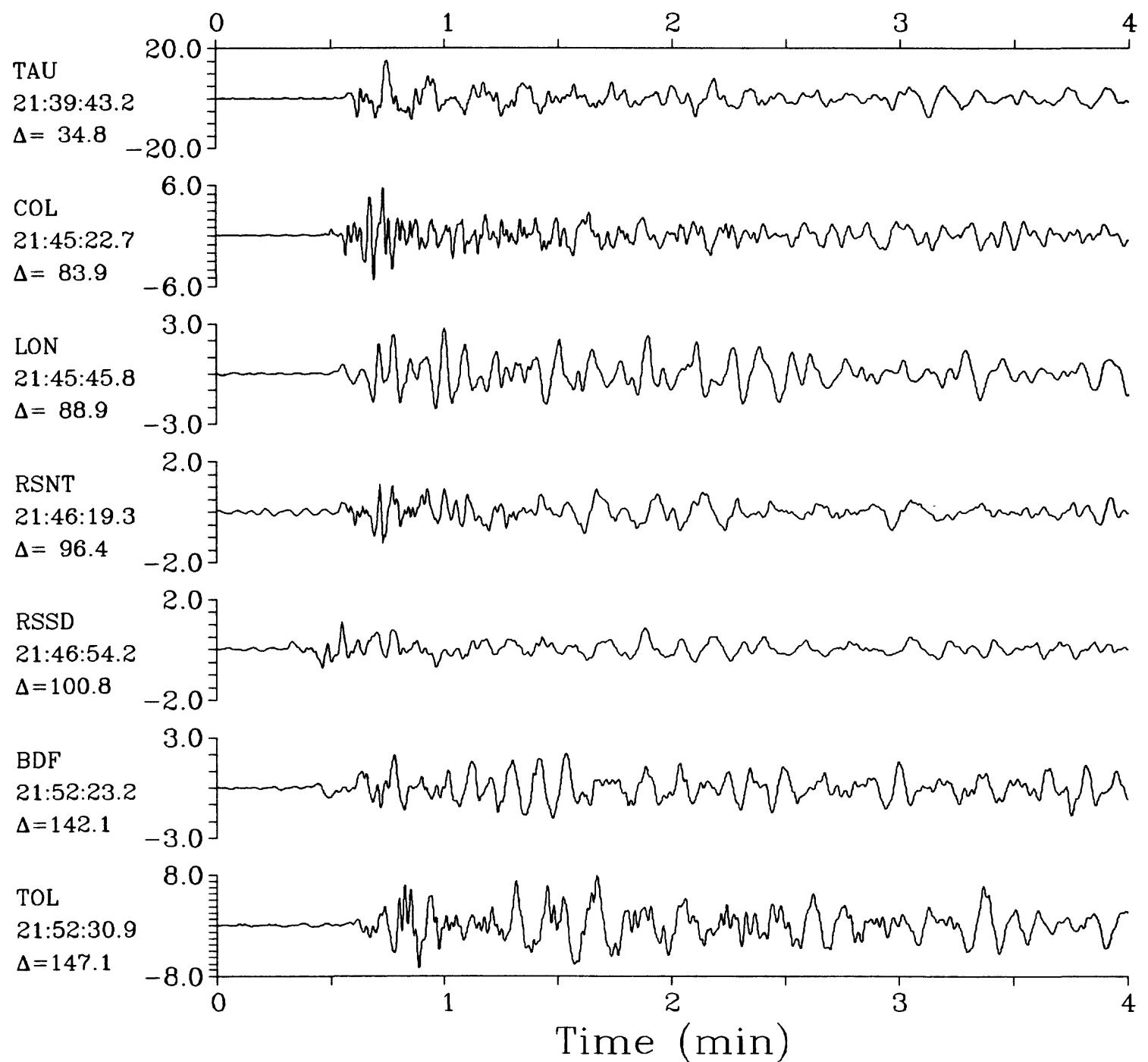
310 SPZ

07 February 1984 21:33:20.50
Solomon Islands h=14.2 MB=6.5 ms=7.5

SPZ



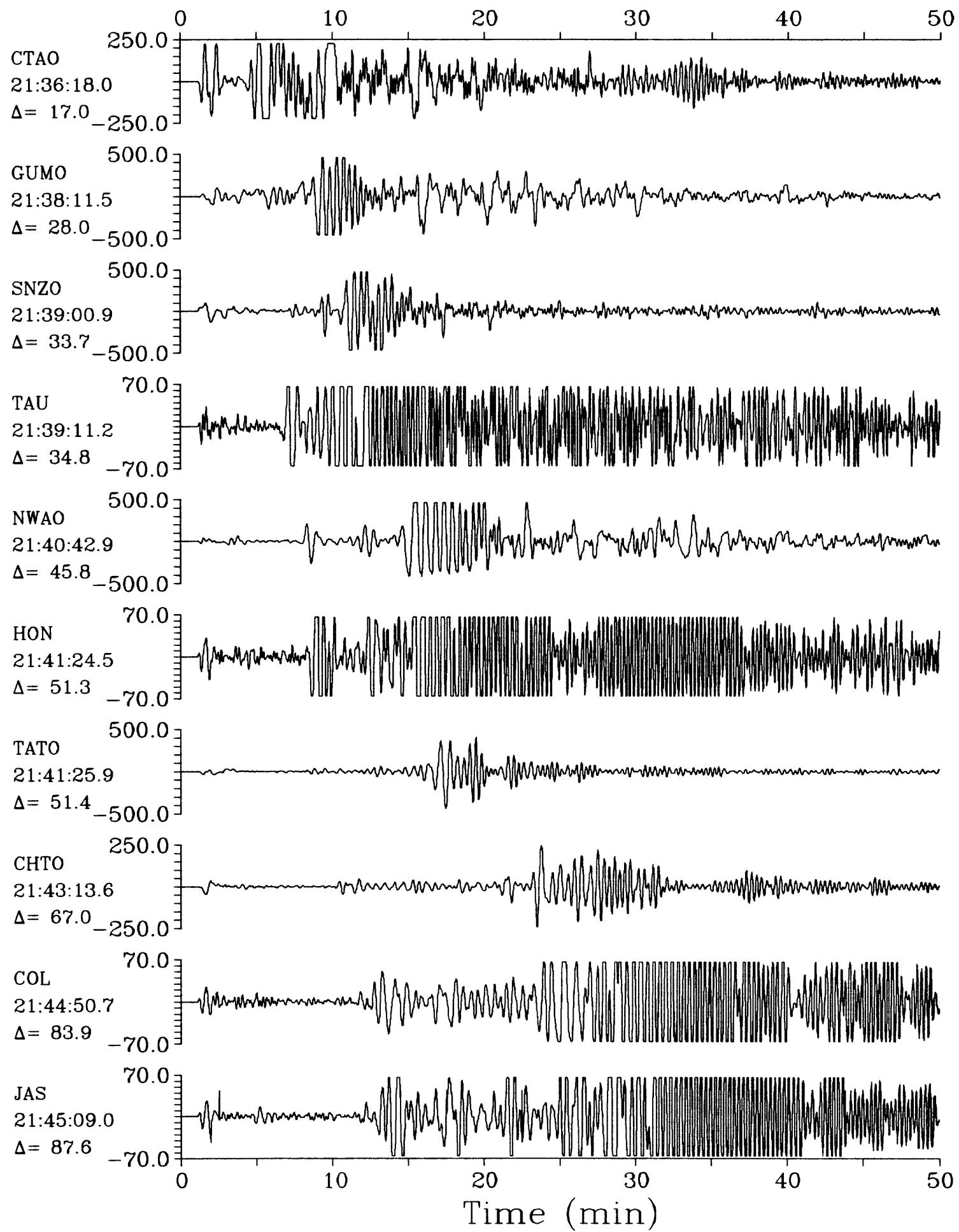
IPZ

07 February 1984 21:33:20.50
Solomon Islands h=14.2 MB=6.5 ms=7.5IPZ³¹¹

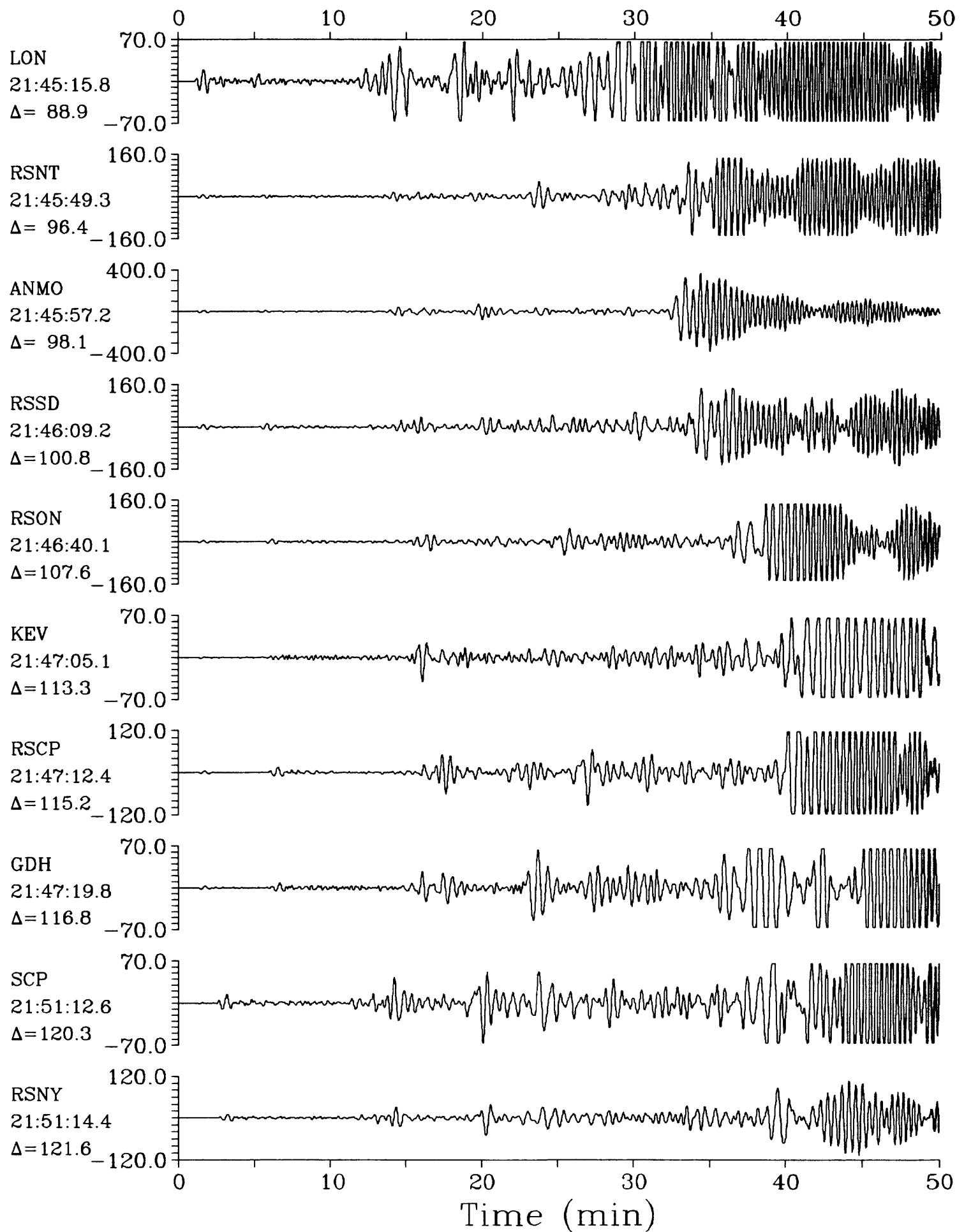
312 LPZ

07 February 1984 21:33:20.50
Solomon Islands h=14.2 MB=6.5 ms=7.5

LPZ



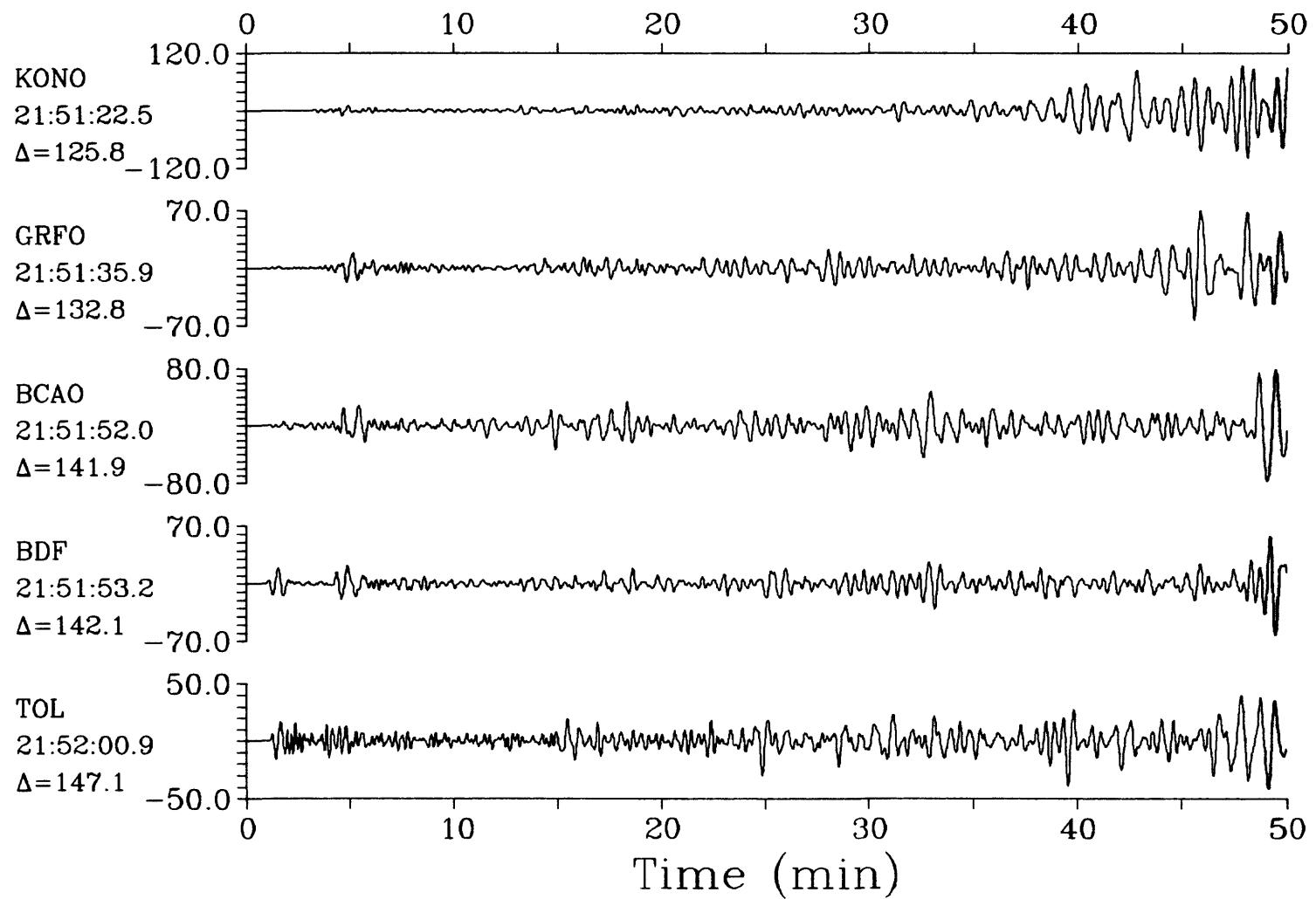
LPZ

07 February 1984 21:33:20.50
Solomon Islands h=14.2 MB=6.5 ms=7.5LPZ³¹³

314 LPZ

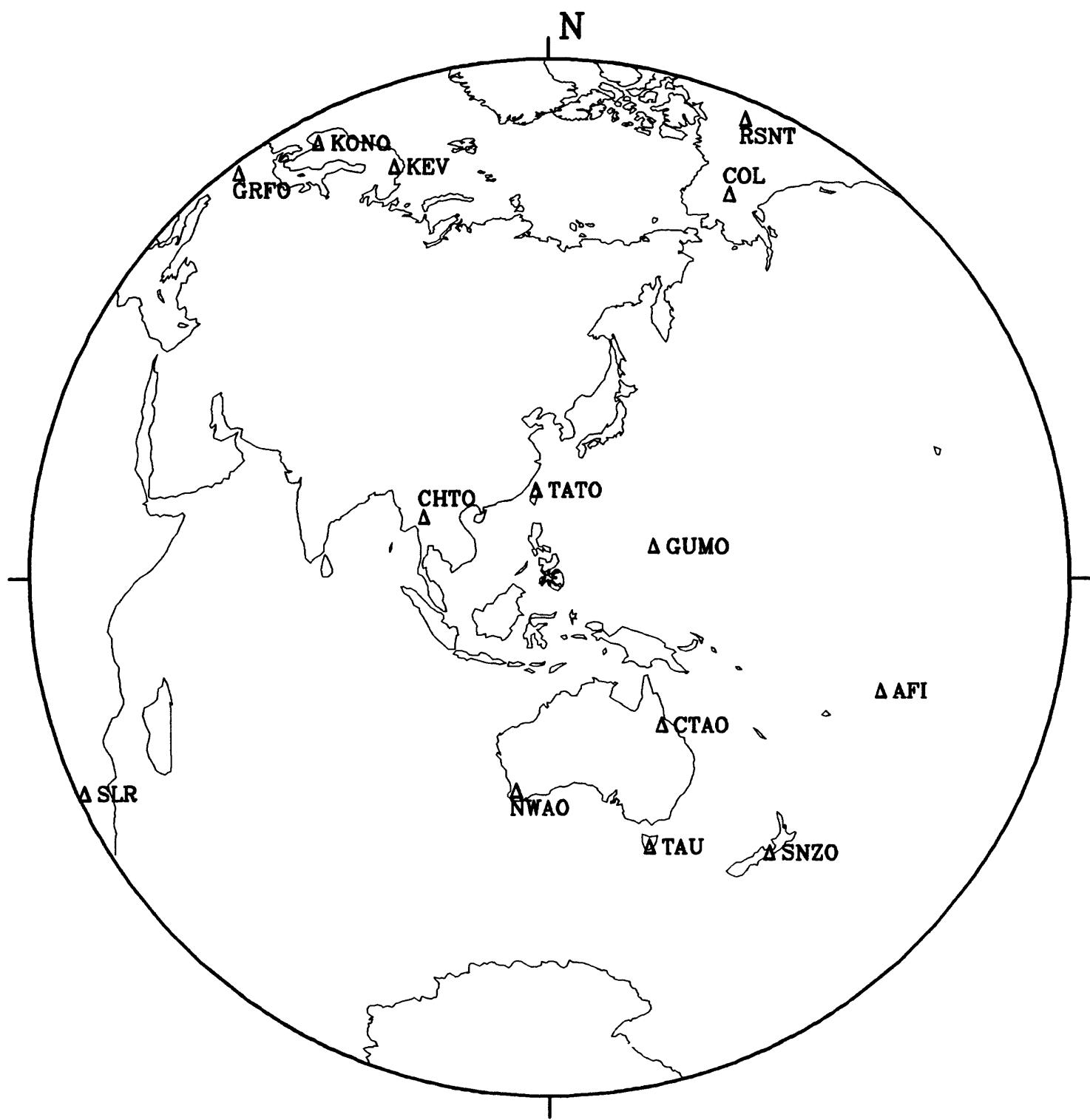
07 February 1984 21:33:20.50
Solomon Islands h=14.2 MB=6.5 ms=7.5

LPZ



05 March 1984 03:33:51.23

Mindanao, Philippine Islands

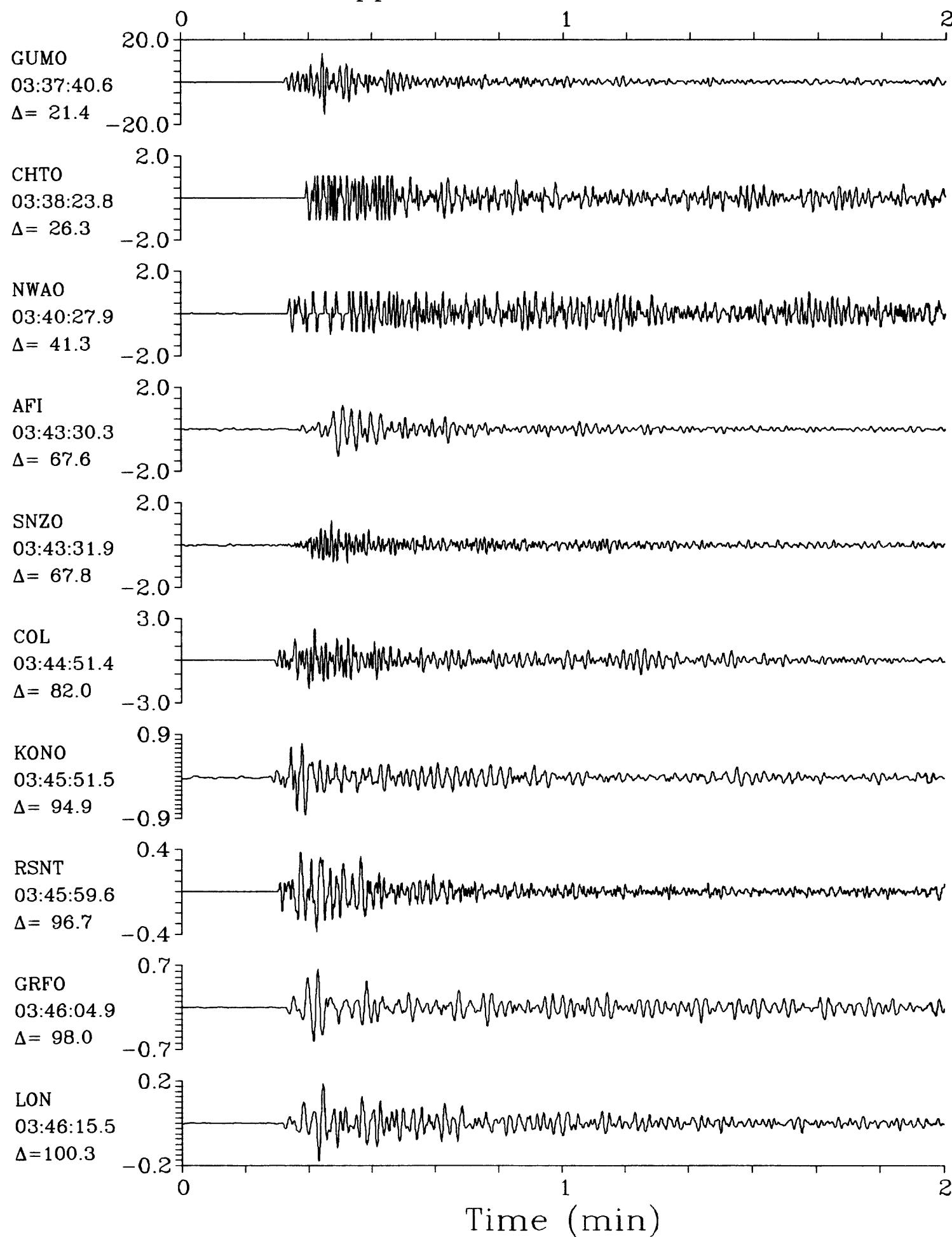


316 SPZ

05 March 1984 03:33:51.23

SPZ

Mindanao, Philippine Islands h=650.6 MB=6.7

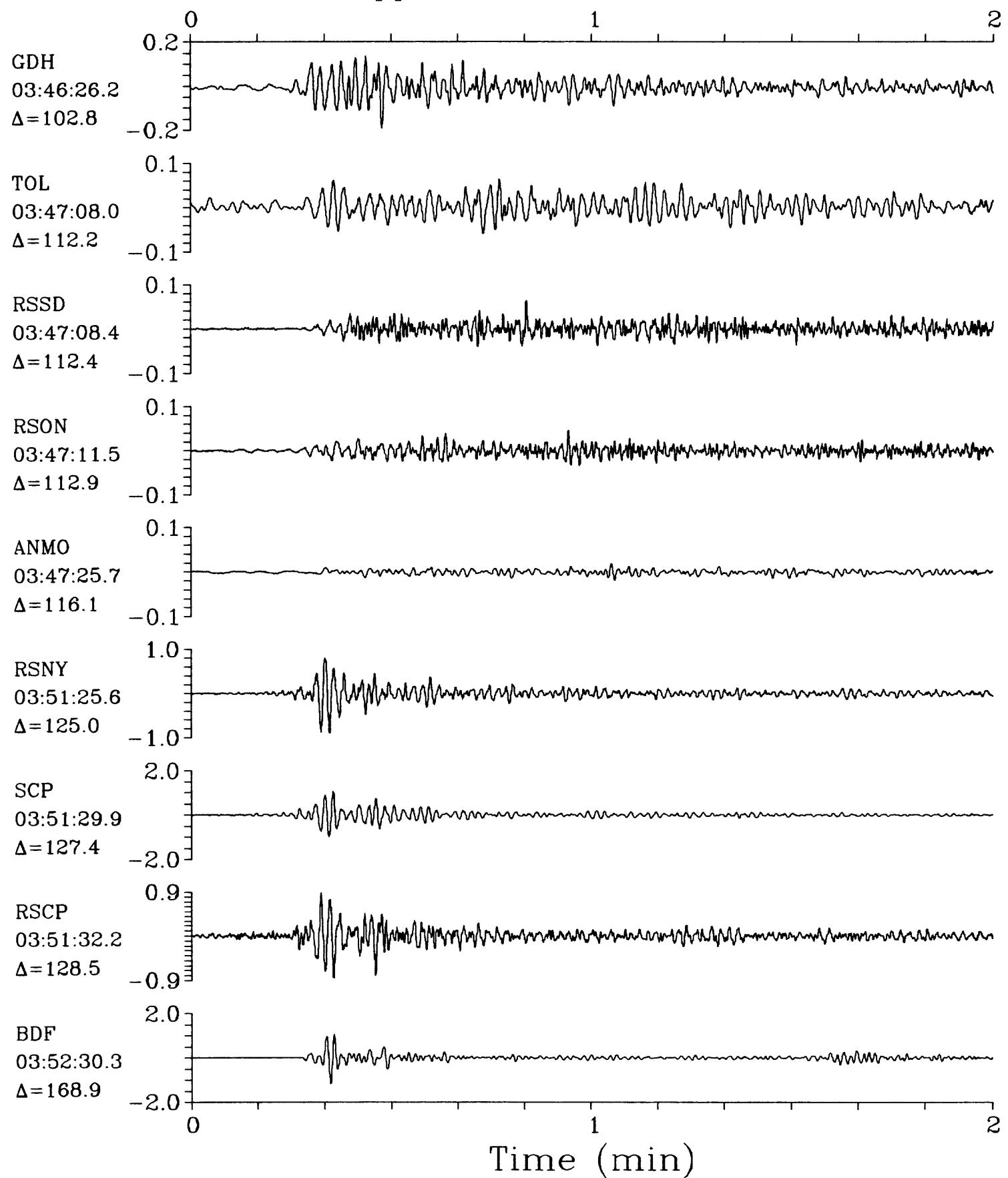


SPZ

05 March 1984 03:33:51.23

SPZ³¹⁷

Mindanao, Philippine Islands h=650.6 MB=6.7

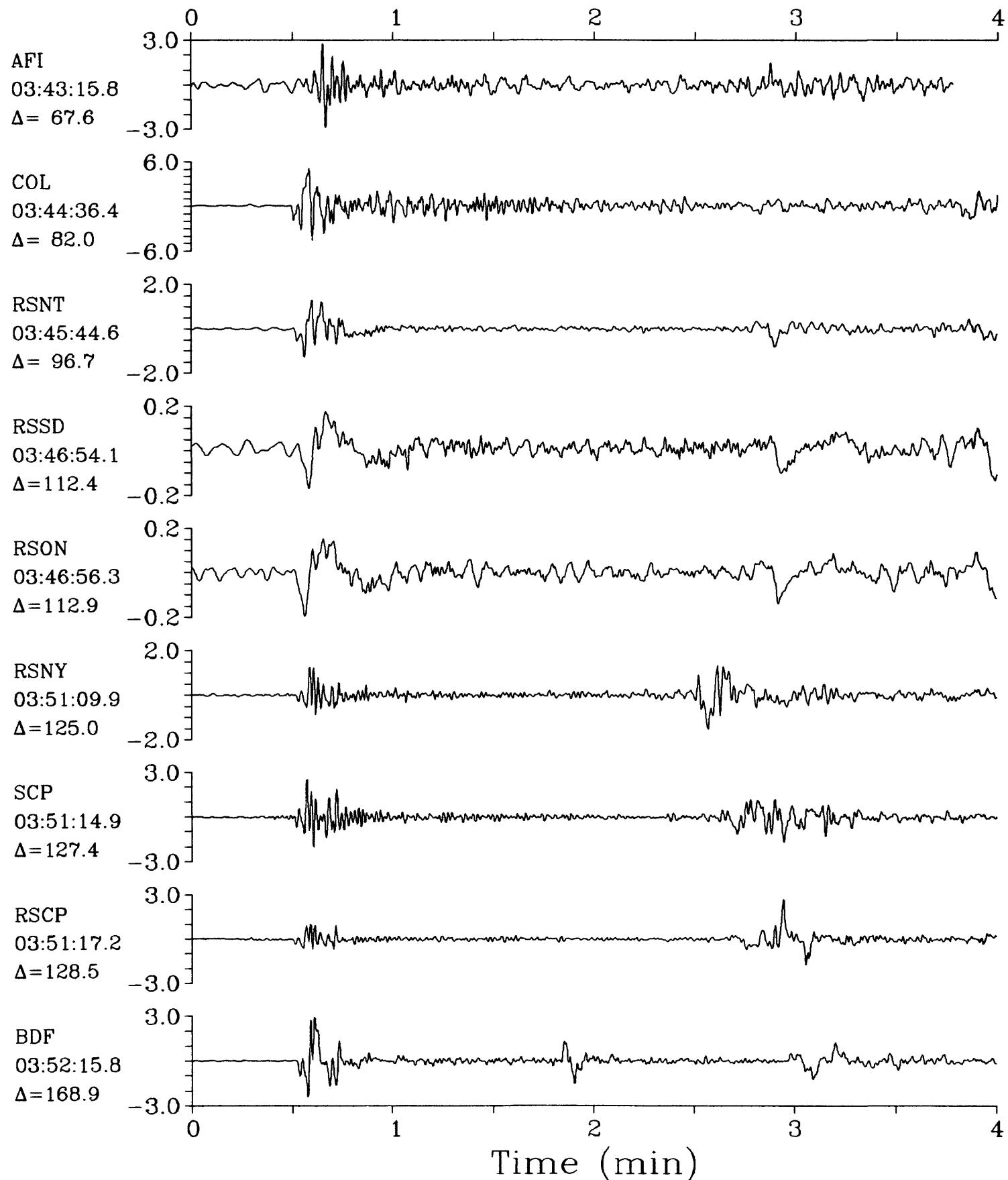


318 IPZ

05 March 1984 03:33:51.23

IPZ

Mindanao, Philippine Islands h=650.6 MB=6.7

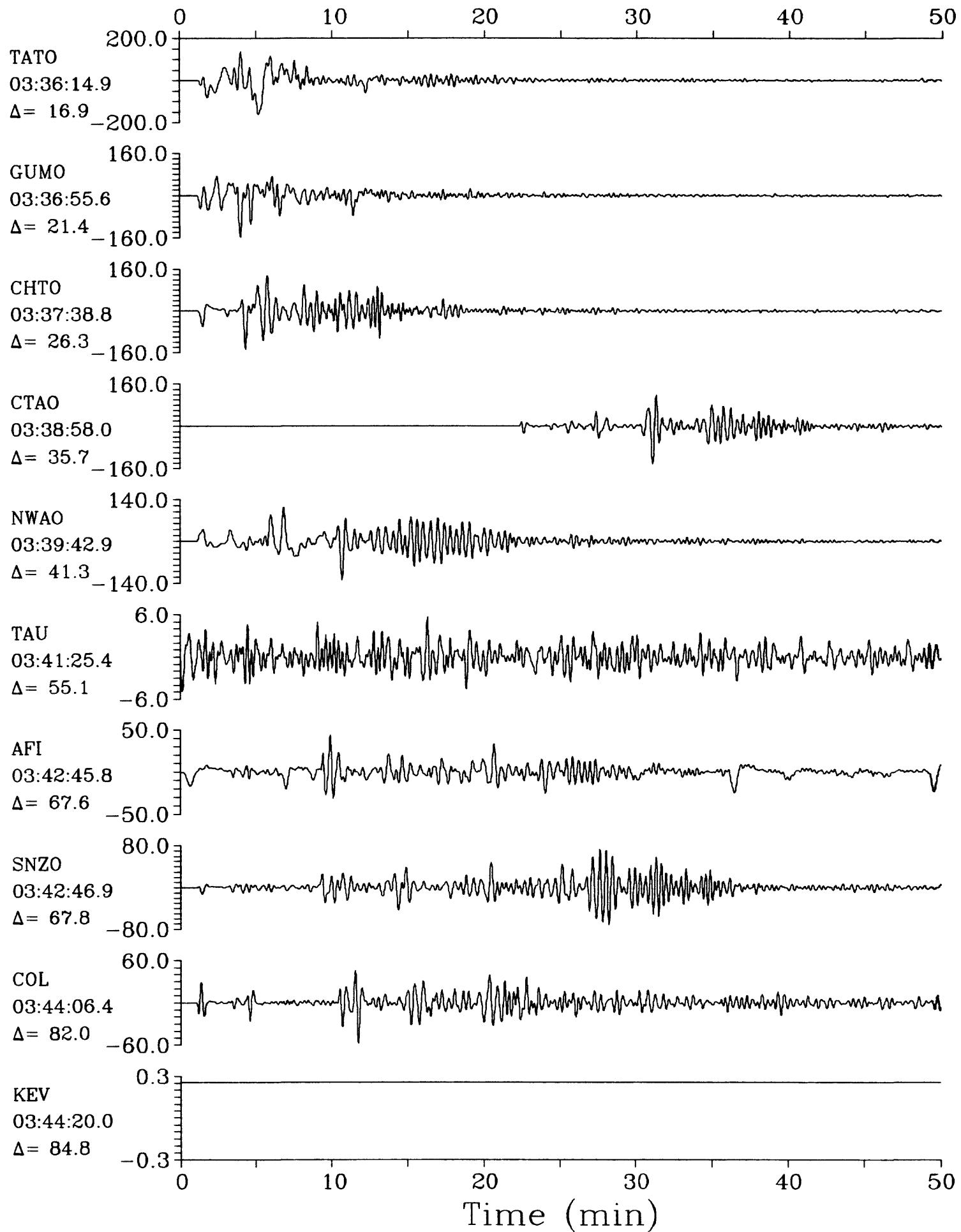


LPZ

05 March 1984 03:33:51.23

LPZ³¹⁹

Mindanao, Philippine Islands h=650.6 MB=6.7

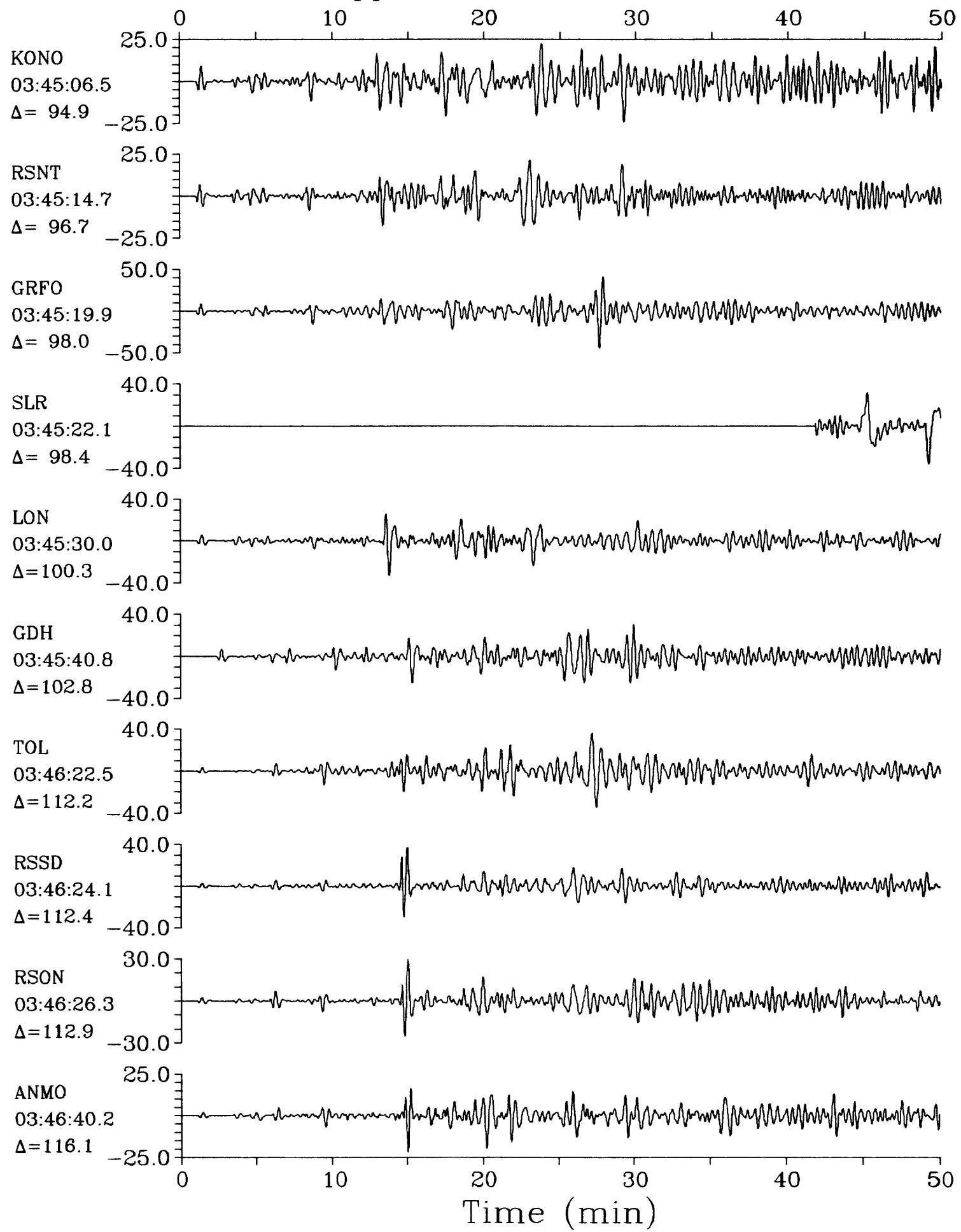


320 LPZ

05 March 1984 03:33:51.23

LPZ

Mindanao, Philippine Islands h=650.6 MB=6.7

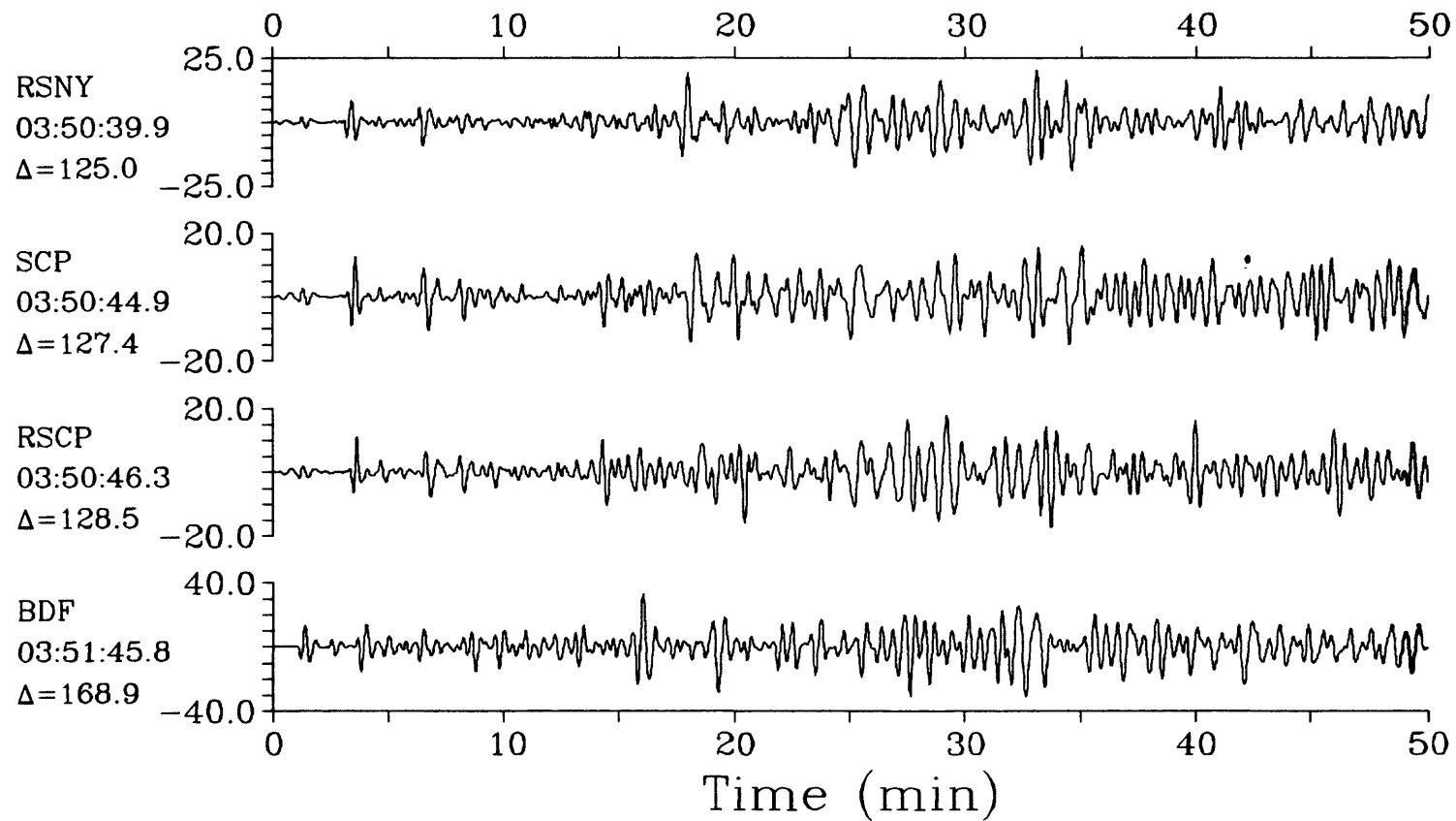


LPZ

05 March 1984 03:33:51.23

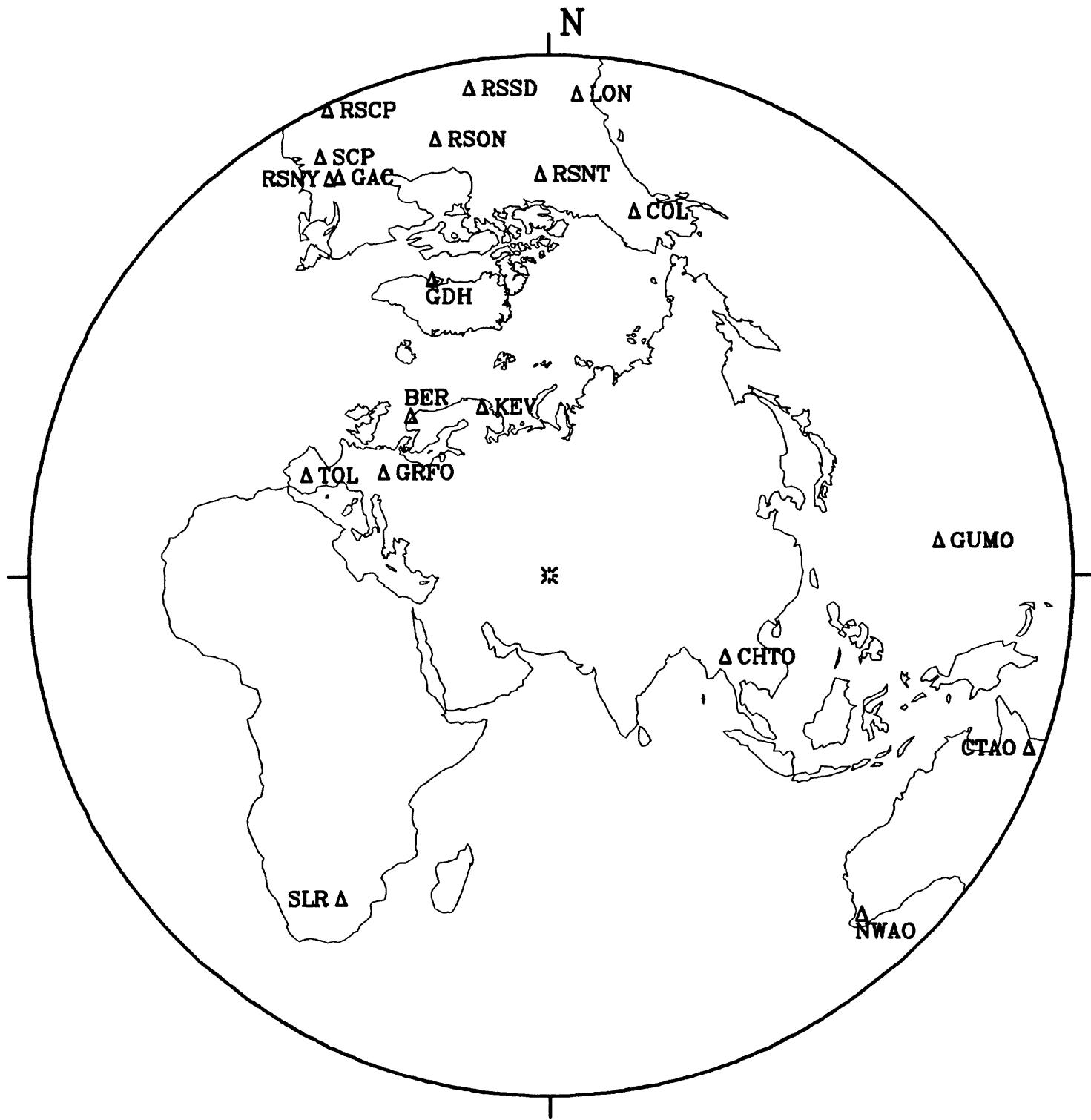
LPZ 321

Mindanao, Philippine Islands h=650.6 MB=6.7

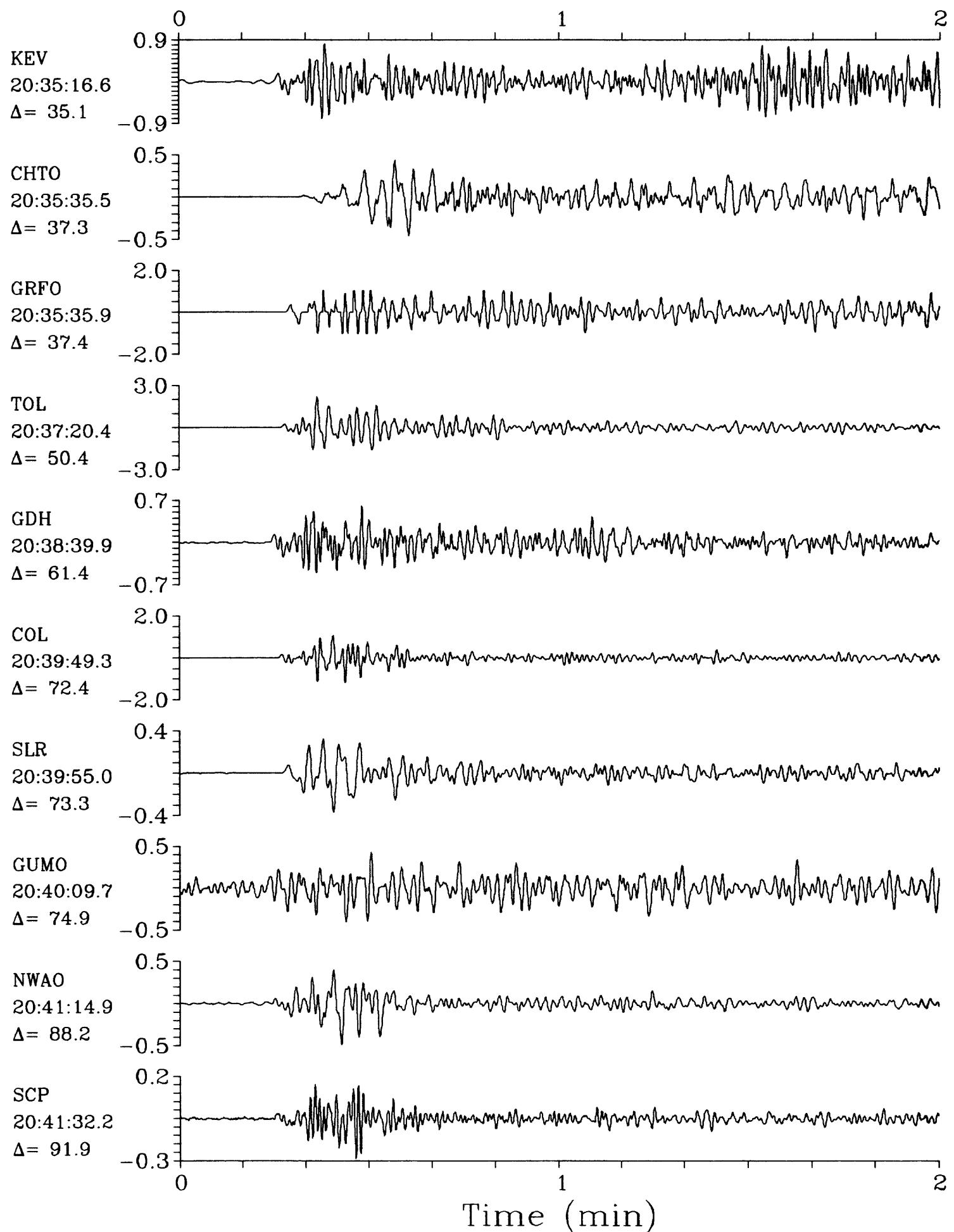


19 March 1984 20:28:39.80

Uzbek SSR



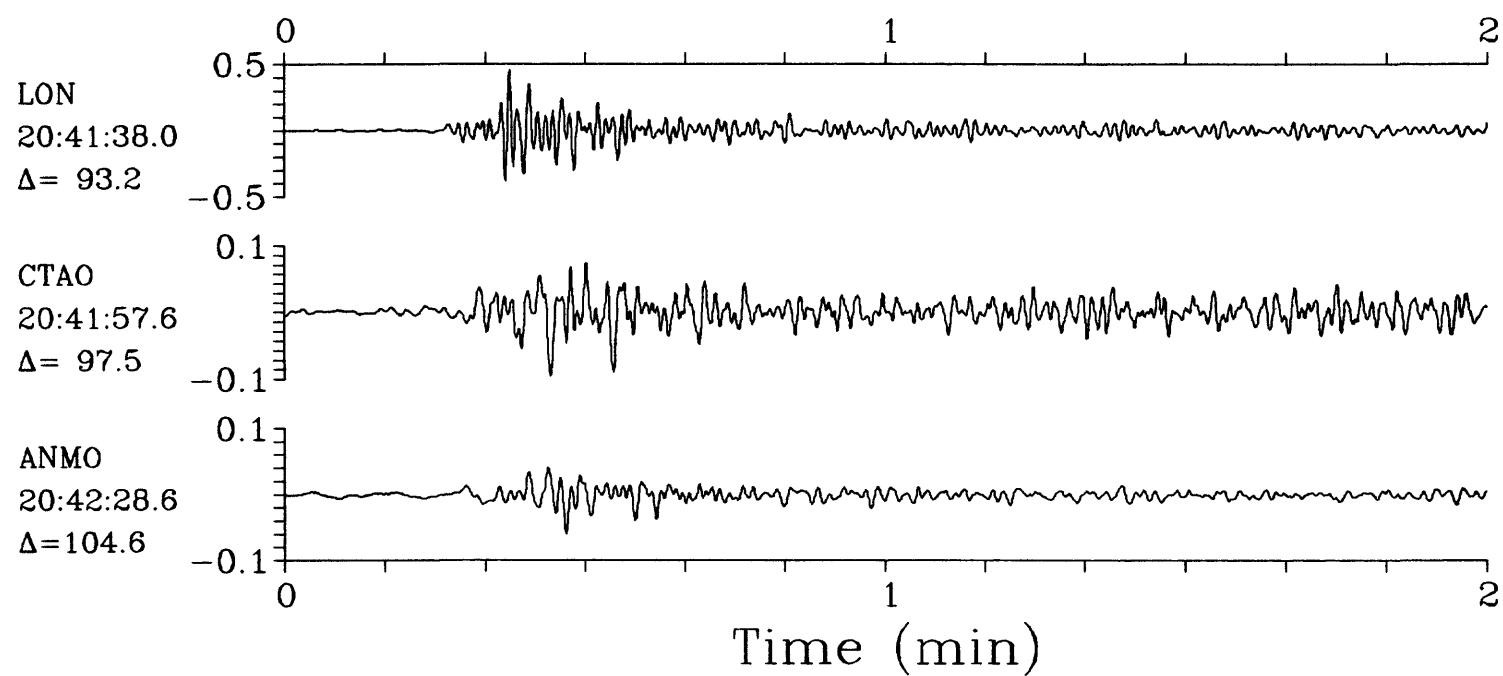
SPZ

19 March 1984 20:28:39.80
Uzbek SSR h=25.8 MB=6.5 ms=7.0SPZ³²³

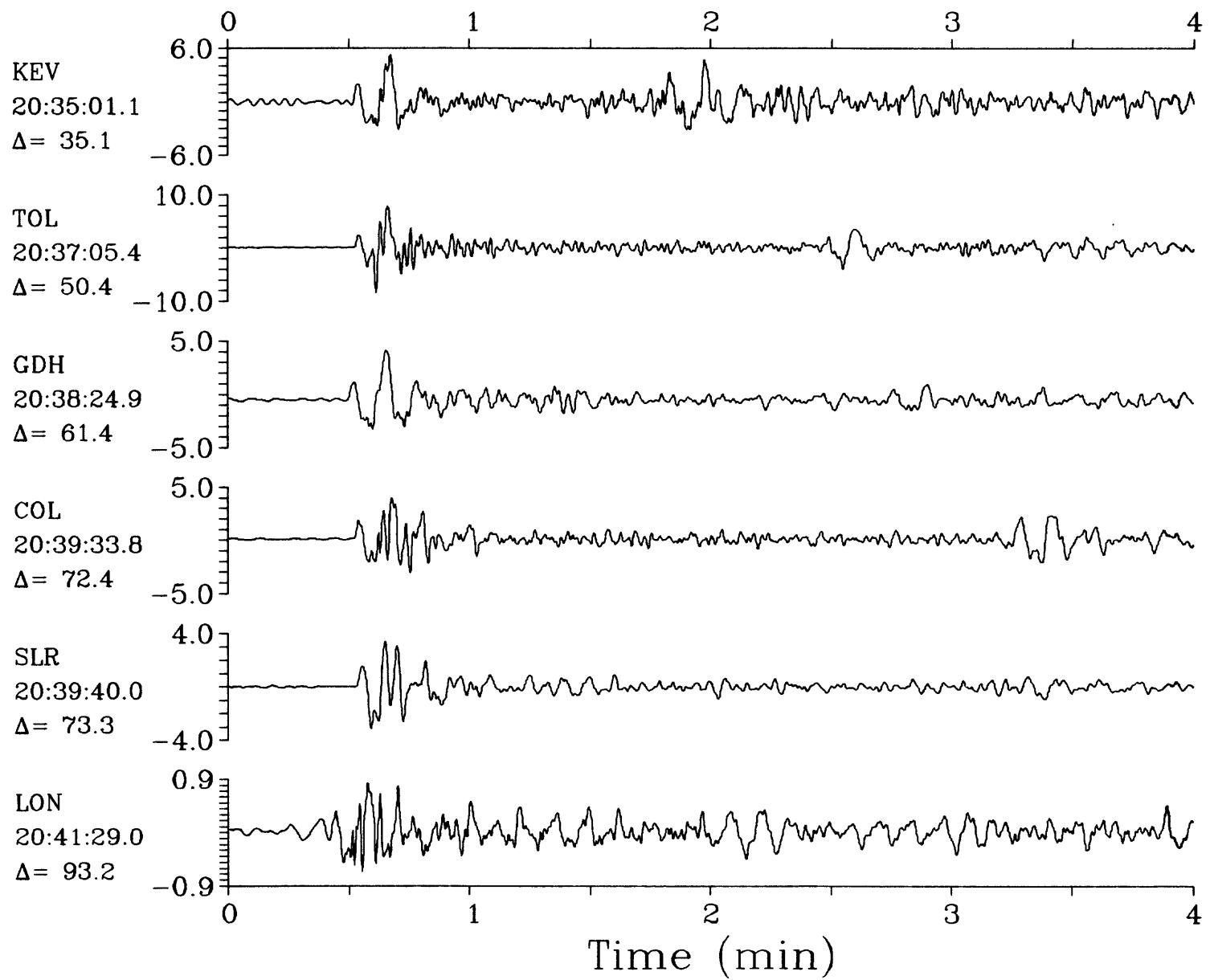
³²⁴ SPZ

19 March 1984 20:28:39.80
Uzbek SSR h=25.8 MB=6.5 ms=7.0

SPZ

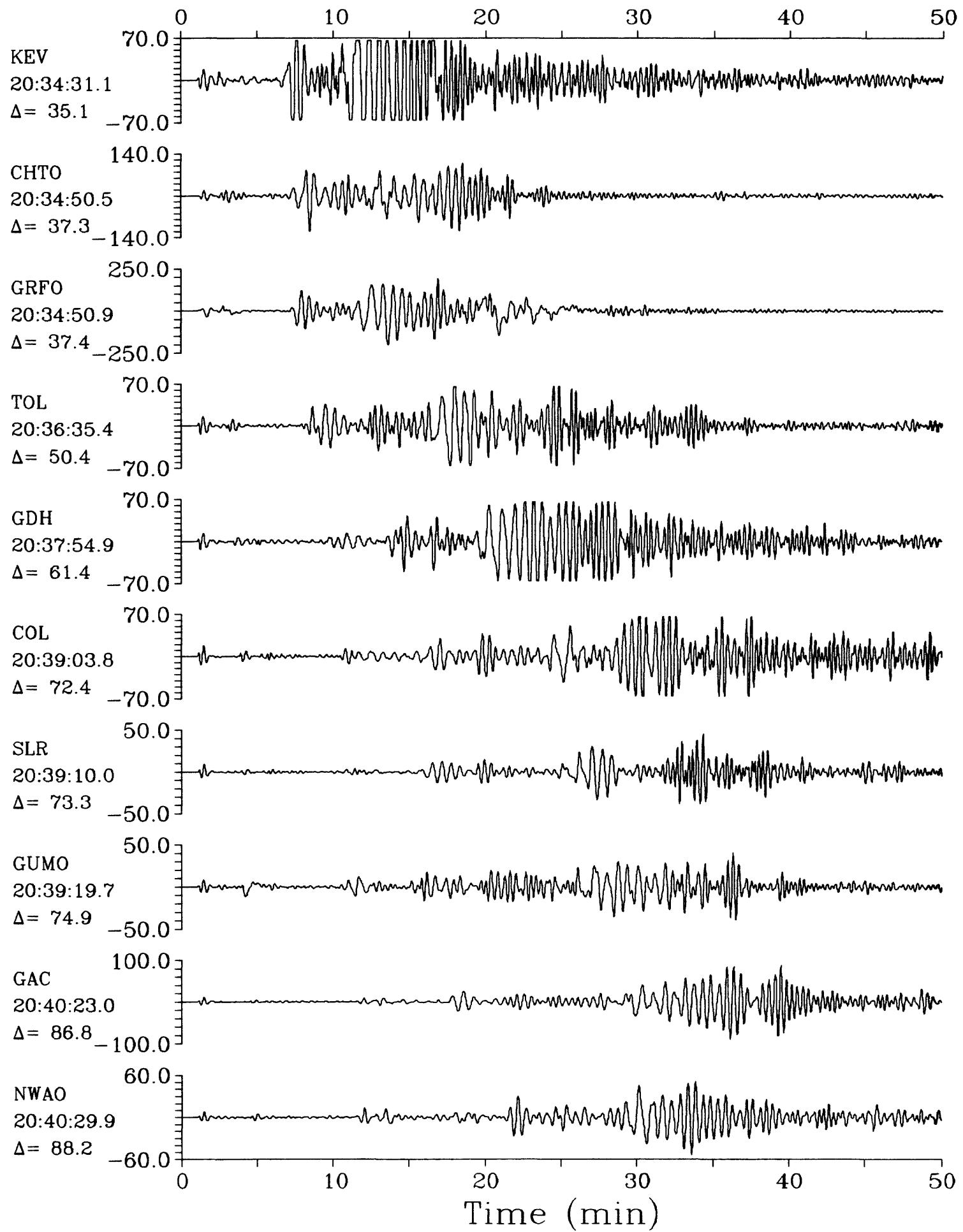


IPZ

19 March 1984 20:28:39.80
Uzbek SSR h=25.8 MB=6.5 ms=7.0IPZ³²⁵

3²⁶ LPZ19 March 1984 20:28:39.80
Uzbek SSR h=25.8 MB=6.5 ms=7.0

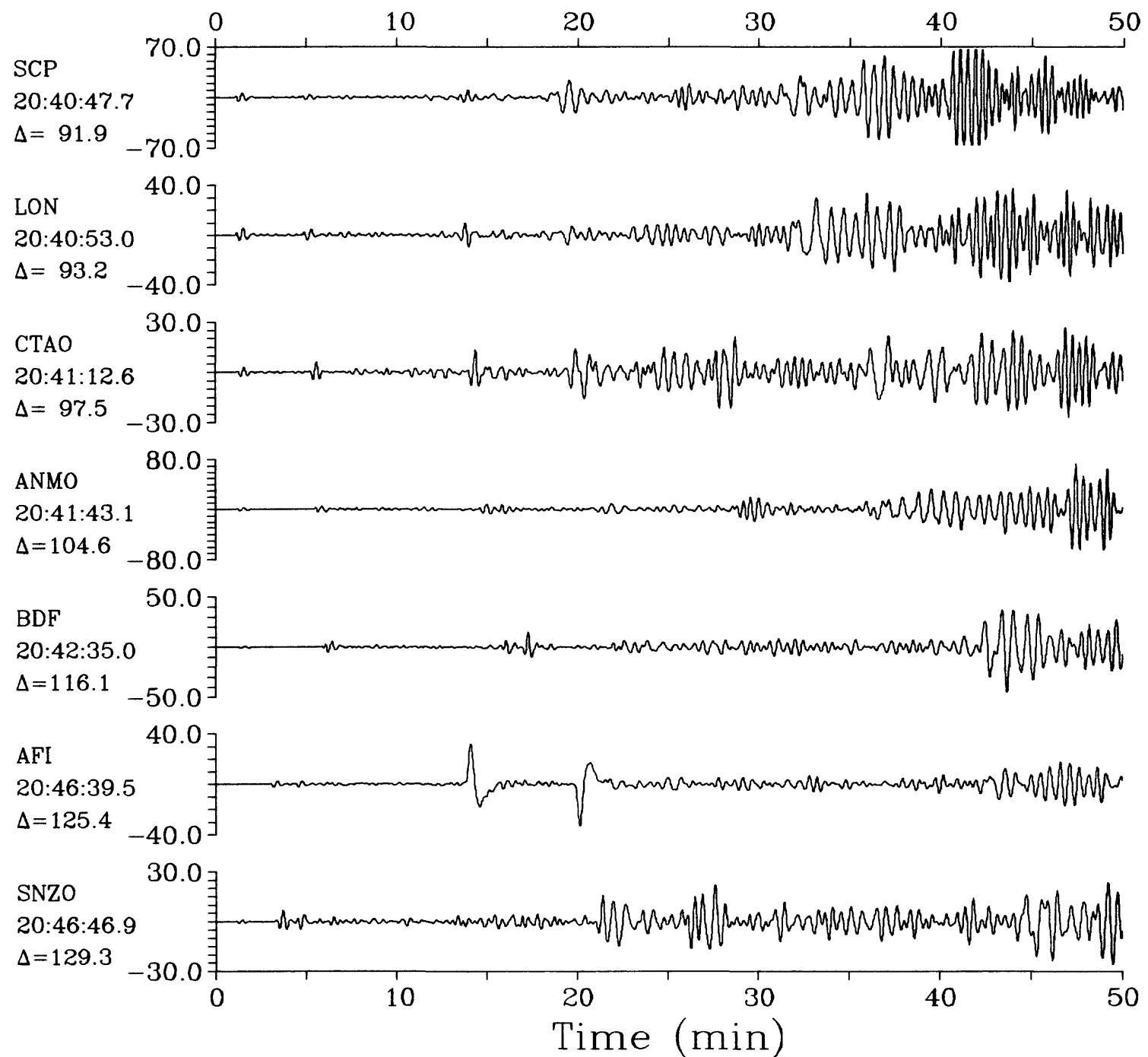
LPZ



LPZ

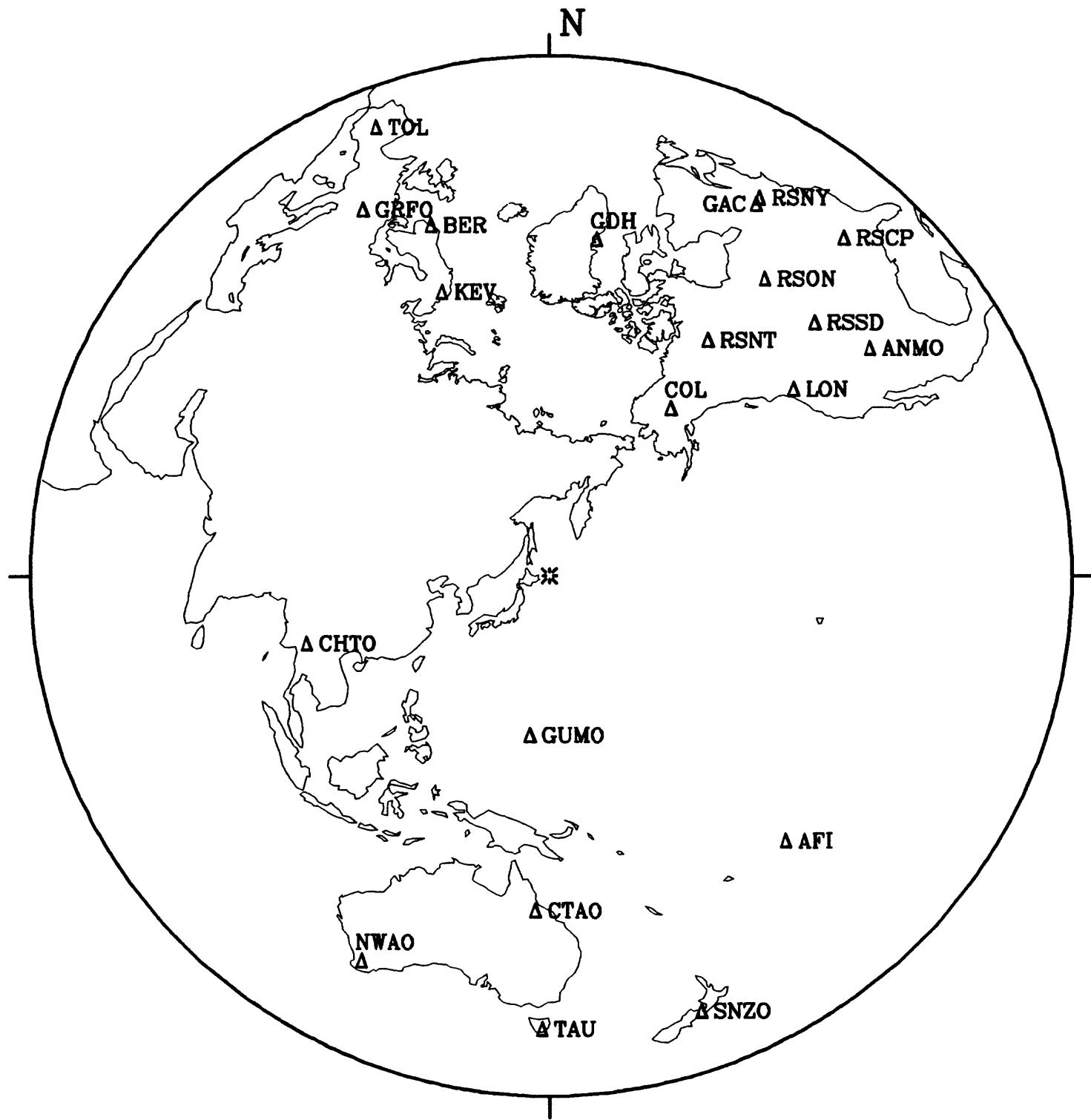
19 March 1984 20:28:39.80
Uzbek SSR h=25.8 MB=6.5 ms=7.0

LPZ 327

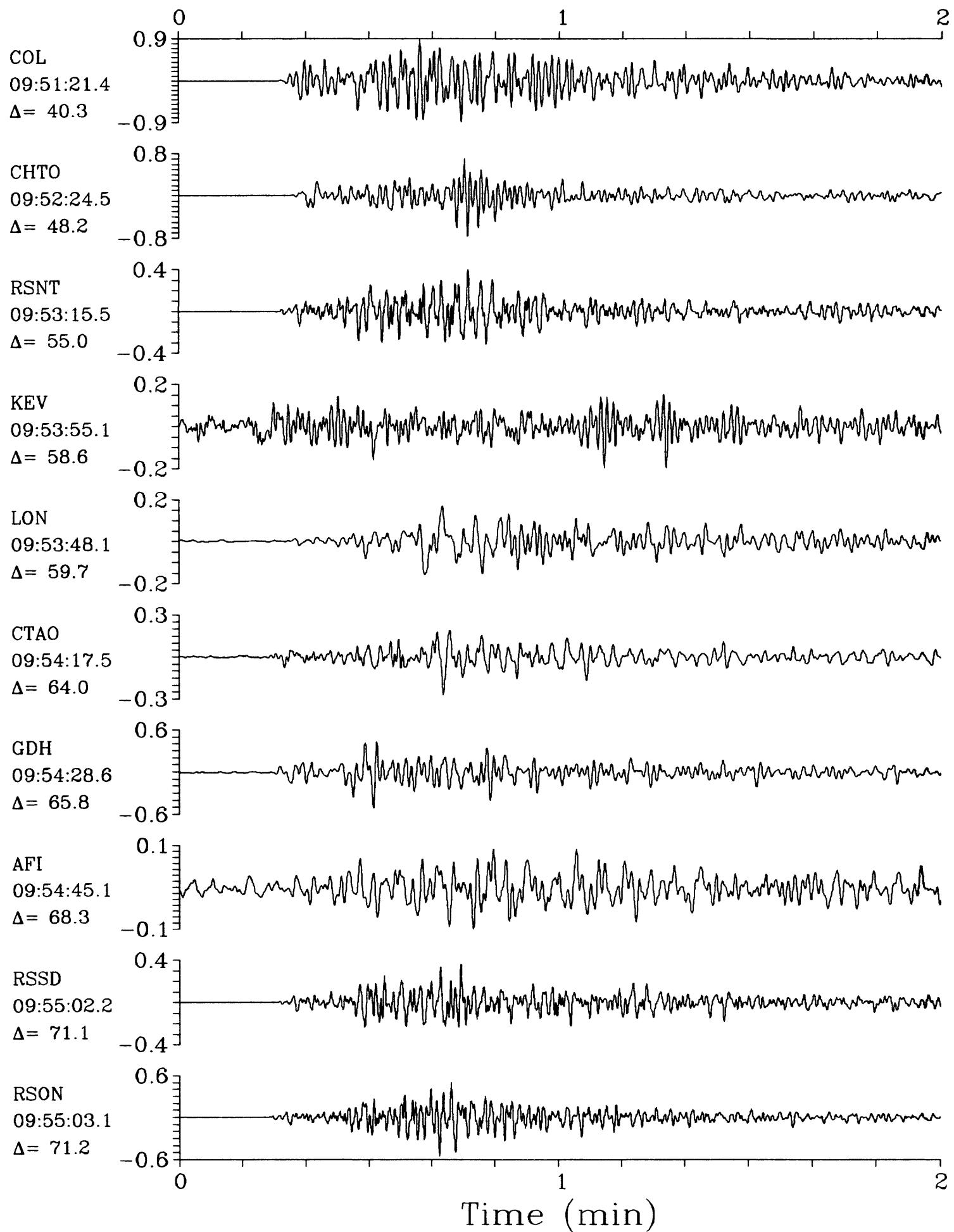


24 March 1984 09:44:02.61

Kuril Islands



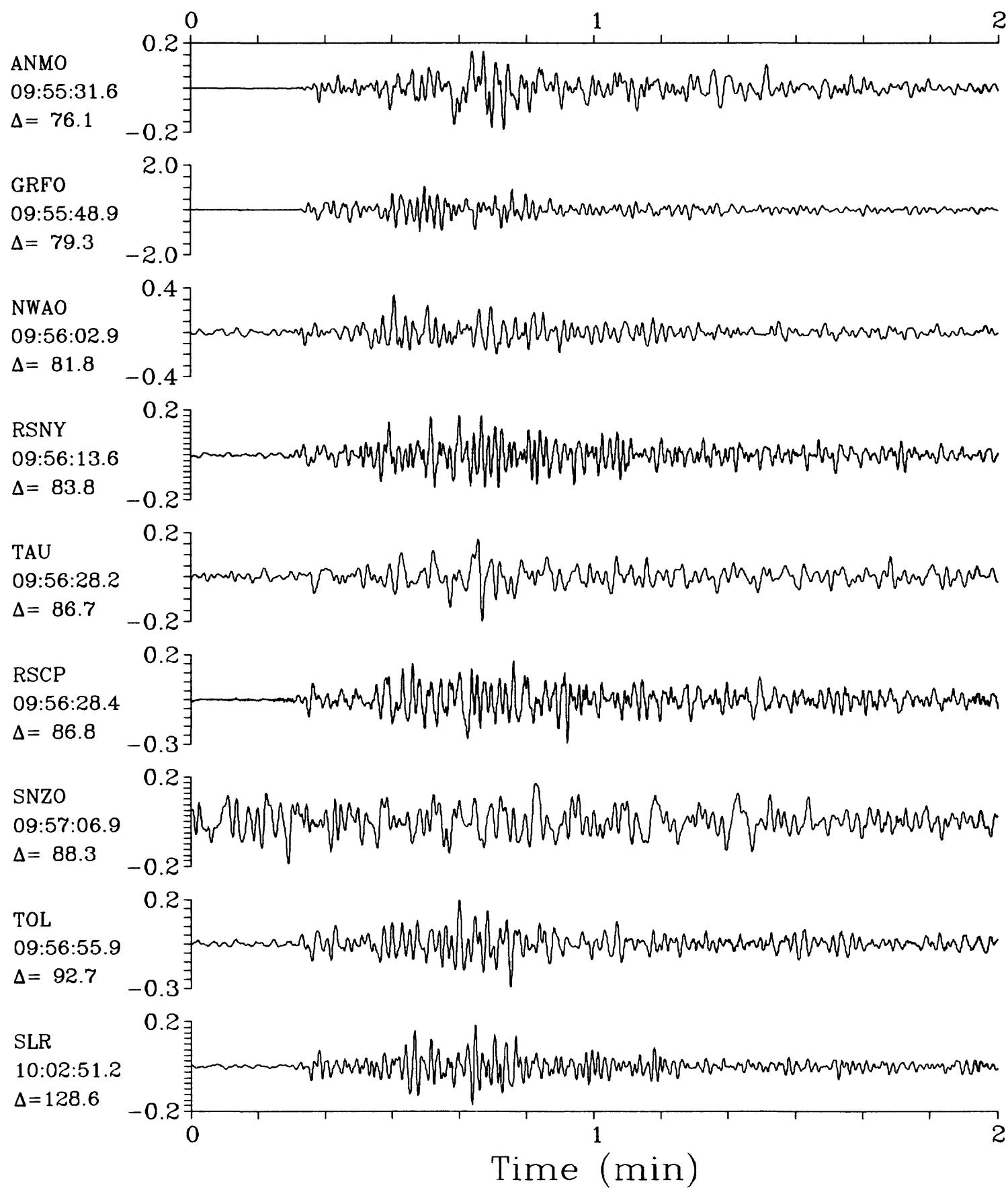
SPZ

24 March 1984 09:44:02.61
Kuril Islands h=43.0 MB=6.1 ms=7.1SPZ³²⁹

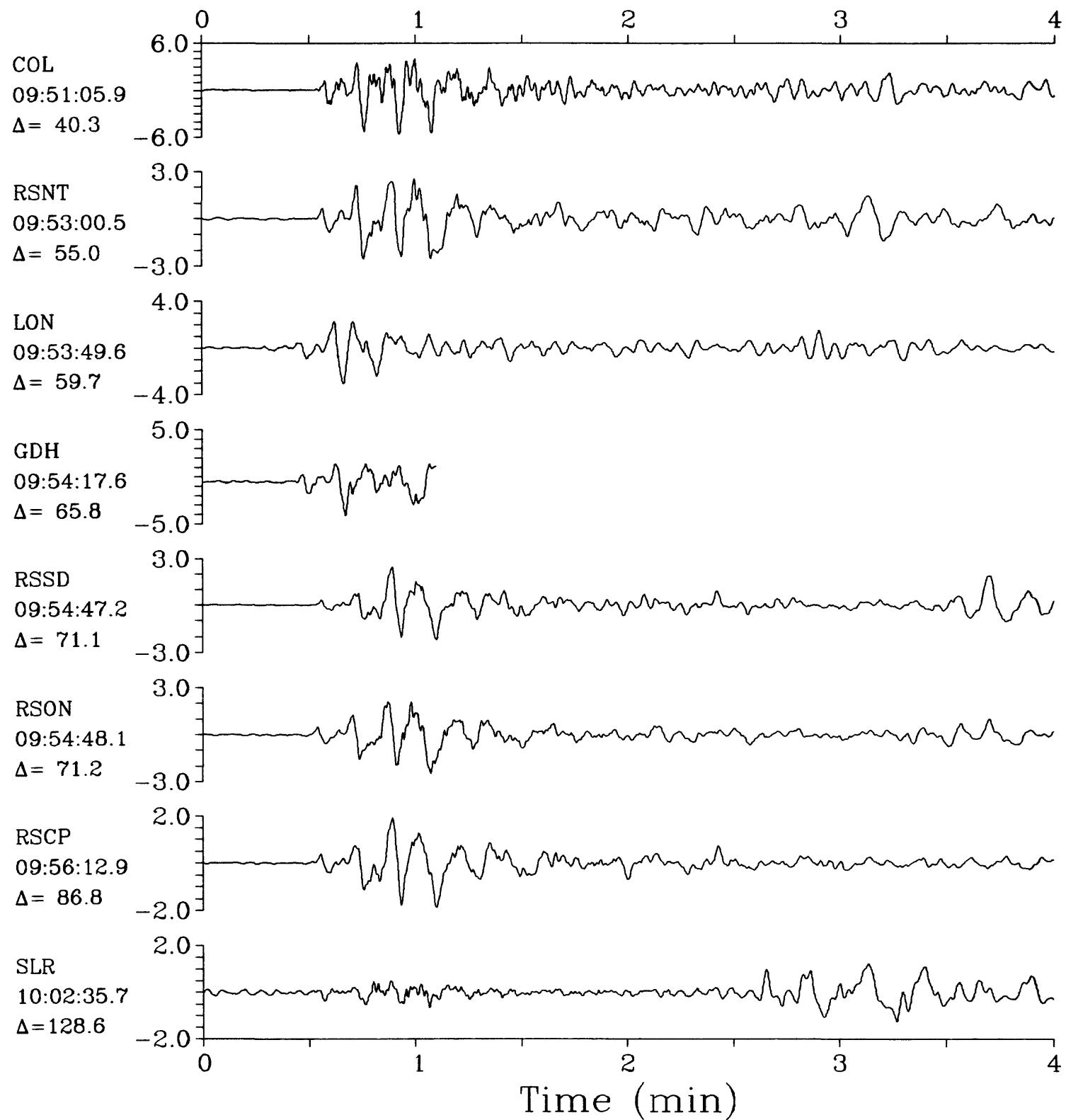
330 SPZ

24 March 1984 09:44:02.61
Kuril Islands h=43.0 MB=6.1 ms=7.1

SPZ



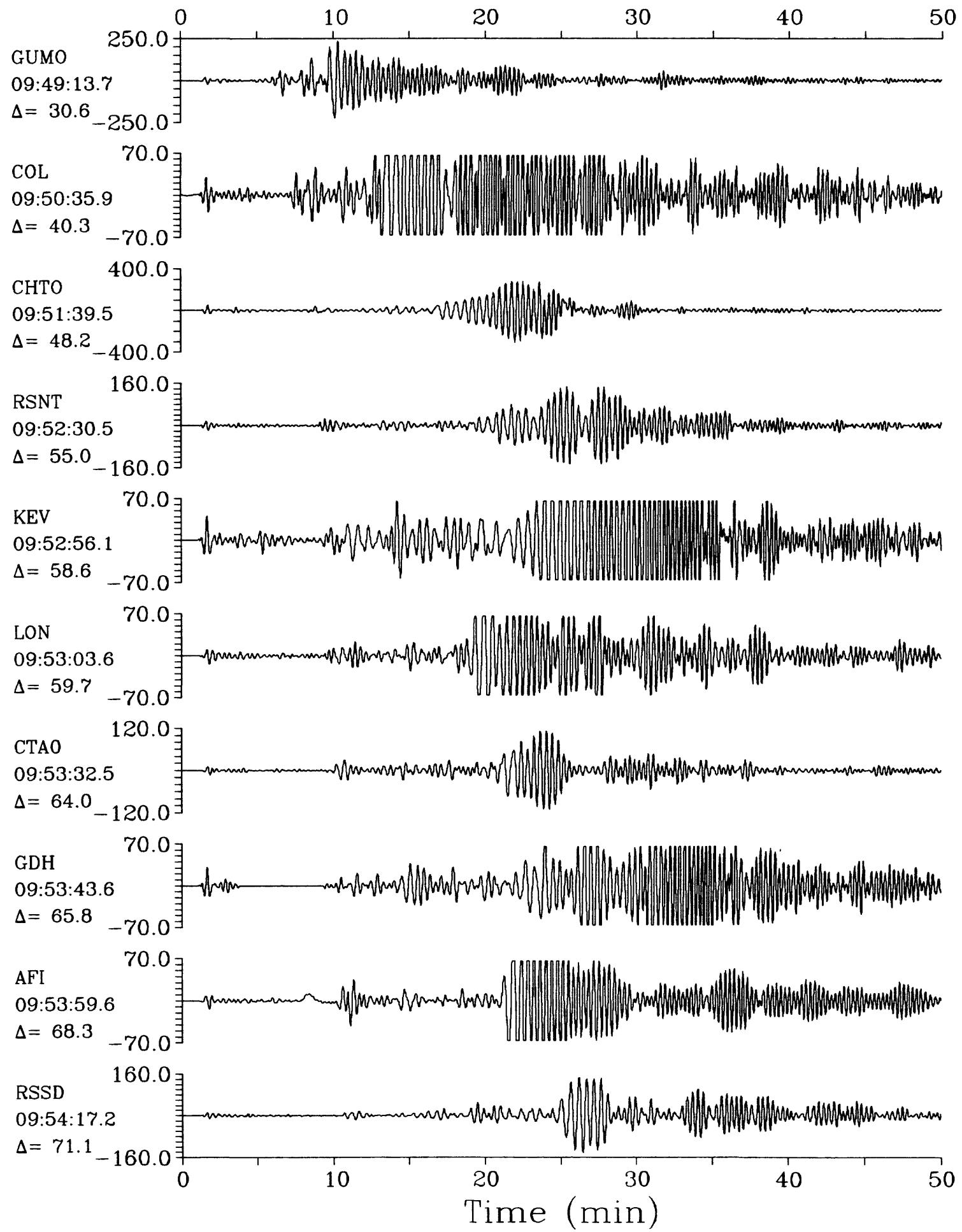
IPZ

24 March 1984 09:44:02.61
Kuril Islands h=43.0 MB=6.1 ms=7.1IPZ³³¹

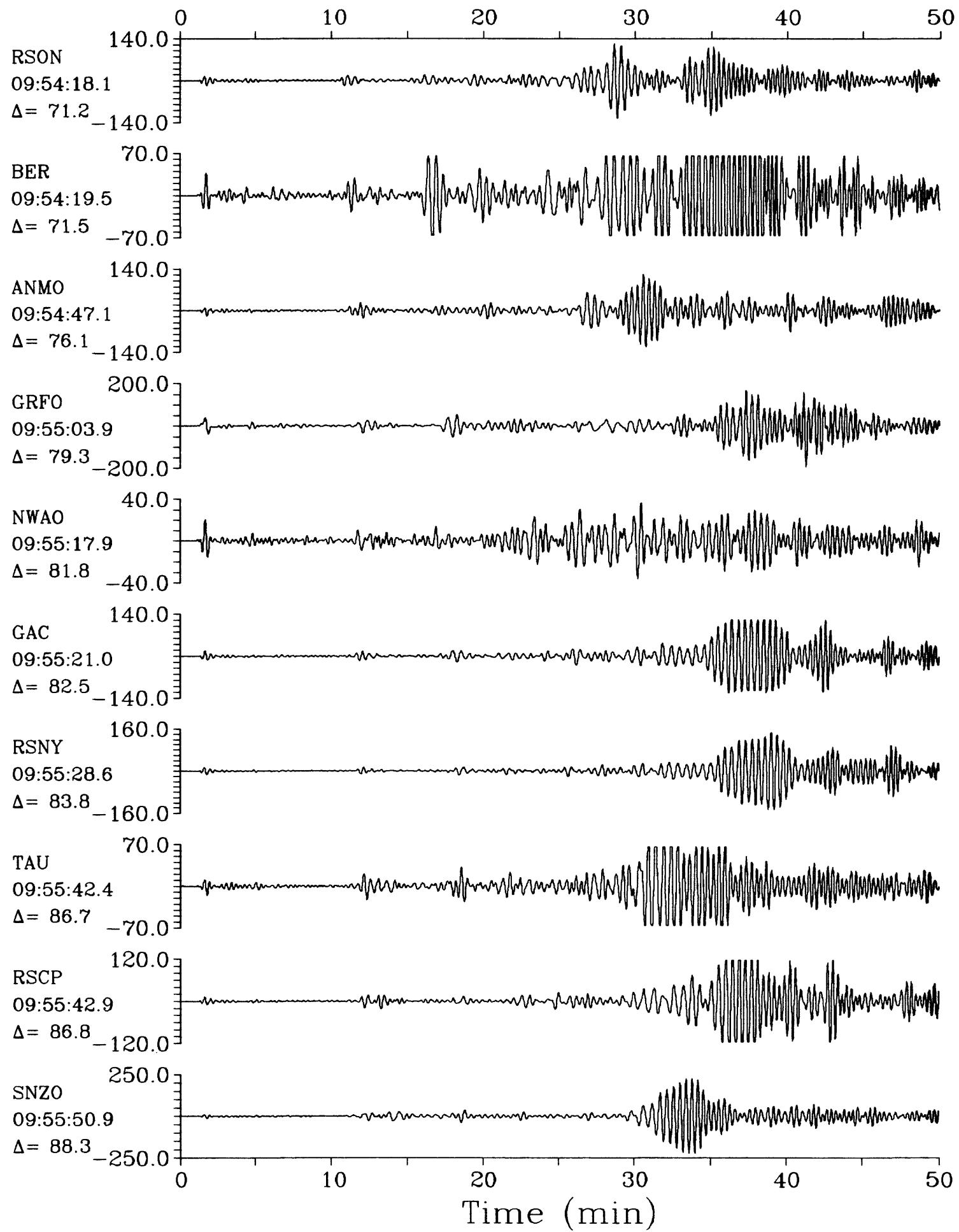
332 LPZ

24 March 1984 09:44:02.61
Kuril Islands h=43.0 MB=6.1 ms=7.1

LPZ



LPZ

24 March 1984 09:44:02.61
Kuril Islands h=43.0 MB=6.1 ms=7.1LPZ³³³

³³⁴ LPZ

24 March 1984 09:44:02.61
Kuril Islands h=43.0 MB=6.1 ms=7.1

LPZ

